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THE MULTIVALUE  TECHNOLOGY MAGAZINE | NOVEMBER/DECEMBER 2017



2017 in Review and a Peek at 2018

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- Saved Lists for Linux
- Case Study: Clarke Transport Migrates to jBASE
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THE MULTIVALUE TECHNOLOGY MAGAZINE

NOVEMBER/DECEMBER 2017

COVER

6 MultiValue Industry End-of-Year Recap Recent years have moved technology deeply into the day-to-day of nearly every culture. We've asked some key influencers in the MultiValue world to talk about how they moved their products forward in 2017. They also talked to us about where they'll be focusing in 2018.

FEATURES

11 Expanding Your Toolkit: Using Saved Lists at the Linux \$ Prompt MultiValue isn't just something we do, it shapes how we think about data challenges. When we leave the comforts of our familiar tools, sometimes it's good to bring a little bit of "home" with us. This is an example of using an MV approach with non-MV environments. **BY KEVIN KING**

15 Case Study: Clarke Transport Migrates to jBASE At the heart of Clarke Transport's UK business is a powerful transportation management system written in Pick BASIC. After hiring a series of new developers, Clarke Transport decided to embrace jBASE for its native Windows capabilities, which makes it easier for programmers without MultiValue knowledge to master the environment.

18 Business Tech: UI/UX Part IV: Kansei Engineering When we think of programming as engineering, we can get lost in a sea of methods like Waterfall and Agile. This isn't that article. Kansei engineering is a guiding principal for mechanical engineering which adapts surprisingly well to programming. Let's take our view of UX up a notch and examine a philosophy that promotes user experience to the top of our priority list. **BY CHARLES BAROUCH**

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From the Inside

There is a constant battle between business and technology, and it looks like businesses might finally realize that winning *is* losing. Over the last decade (and more) companies have been in a battle between the need for technology and the requirements of business' rules and practices.

CEOs and CIOs have come and gone, with many of them focusing on the technology and software via a shortcut logic: "If it works for ACME corp, it will work for us." This philosophy has been very damaging. It encourages people to implement solutions that work for massive companies without understanding if they scale to the smaller shops or if they are a good fit in any other way.

It also misses the point on another level. That giant company may have invested a few million or more, modifying that software. That means that the thing you are buying isn't really the same as the version they are using.

Much of this is predicated on what everyone is seeing in the consumer market, what they read in publications, and see on the news. Then when a salesperson comes selling software or hardware and says, "Oh, we do that," and "We do this," and your current systems don't, it looks very appealing.

The problem is framing. When I ask you to judge two products on taste, you need to know that while that works well with desserts, it is the wrong system for picking floor cleaners or an industrial paint. This skewed framing

creates the conflict between business and technology.

The classic syllogism is:

John is a boy. John has freckles. Therefore all boys have freckles.

The business version is:

This software works for <some Fortune 100 company who may or may not be in our industry, country, or market segment>. I have a company. Therefore, it will work for me.

Technology should be chosen based on its ability to make our business better, but not all technology is right for *your* business. One size does not fit all. As marketing increases, as the public becomes more immersed in technology, shortcut logic gets applied more frequently.

While MultiValue is now being sold the modern way, older systems were bought despite the lack of "sizzle." They were bought because features and price established their value to people who *were* looking at the details. Most older MV applications still do well under scrutiny. The newer ones tend to cover both sides, the shortcut logic and the detail-oriented approach. Our market changes with the times.

Setting the shortcut logic aside, there is also a tug-o'-war between software focused on technology implementations and software focused on business implementation. They can be quite complementary, but they can also be at odds with one another.

For many years, we in this community have come down primarily on the side of business-



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Learn more about the MultiValue Symbol and see what MultiValue Technologies and MultiValue Communities exist to help you support and manage your business and systems. To find out more visit

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focused implementations (does it handle AR, AP, inventory?), and have avoided the technology focused implementations (does it interoperate with the web, can it do automatic data encryption?) for some examples. This has caused our business software and infrastructure to look and feel aged. It is what most of us in IT feel like we are battling: "Our software is old, limited, and needs to be replaced with new technology to make our business better."

This should lead to the question: What it would take to replace existing systems with new technology, versus the effort involved in enhancing the existing systems with new technology? Often it leads to a yearning to start over, which has a massive hidden cost created by the loss of business rules.

Business-focused implementations are always more successful than technology focused implementations because you are solving a business problem. The problem is already well defined,

thought through, and implemented into existing processing, instead of replacing processes. Of course, solutions which speak to both needs are the best approach.

When replacing existing business applications with something new, very rarely are you focusing on solving a business problem, even though some in the company may think they are. *The new software has all the latest bells and whistles and is technically advanced, so logically it would be better than the old software.* This is the shortcut logic talking.

Once implementation of the shiny new system is complete, most businesses find they don't use the vast majority of the new features. They begin to see the loss of features which they had in the previous software. The project then becomes a failure, but it can't be considered a failure, because it has to work and you can't go backward; too much money has been spent.

That doesn't mean that all changes are bad or all new

implementations are failures. It means that there are a few right ways, and many wrong ways, to replace a system. When a replacement is decided based on a business-focus, it is forced to answer the same needs served by the existing applications as well as answering the "What's new and better?" aspects.

At the end of the day, software is a part of how your business runs. The same way hiring a bad employee at the executive level can derail a company, "hiring" the wrong software can be just as dangerous. Not all technology is equally suited for every business, even if you are in the same industry. As business people, we can't settle for shiny. Once we do a business-focused review, we may find that the old horse has a lot more races left in him. **IS**



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MultiValue Industry End-of-Year Recap

Recap is our annual tradition. We look back at the end of each year and see how the landscape has changed. Normally, a tradition is about doing and seeing and saying the same things. But if the years have taught me anything, “the same things” are never what we find.

2017 has been a challenging year for many businesses. The global economy and nearly every local economy have faced rapid changes. From cryptocurrencies to virtual companies, the very foundational definitions of what money and technology and work mean have shifted. We asked some of our friends in the MultiValue community to talk about what they see and how they are preparing for the coming year.

Entrinsik

What new features or services did Entrinsik introduce in 2017?

With its release in August 2017, Informer 5 has been re-imagined from the ground up, to dramatically enhance performance and leverage an

extensible architecture that simplifies data discovery and analytics without sacrificing functionality. With Informer 5, organizations can quickly connect to their traditional or uncommon databases, spreadsheets, and unstructured data streams all without time-consuming warehousing or cubing. Users can access, blend, and cleanse data in a few easy steps; then utilize data discovery to explore, analyze, and visualize information relevant to them. Informer enables end users to easily manipulate and interact with data, collaborate with colleagues, and even create personalized home pages.

Informer’s crisp, modern, user interface provides an easy-to-follow hierarchy and an immersive user experience that drastically cuts down on the learning curve associated with other BI (Business Intelligence) products. Watch the product tour [*HERE*](#).

What was the greatest or most exciting thing that happened to your company or product in 2017?

In addition to receiving high ratings from Entrinsik customers on independent software review sites such as [Capterra](#) and [TrustRadius](#), Entrinsik Informer received several top rankings in The BI Survey 17, the world’s largest and most comprehensive survey of business intelligence end users. Within its peer groups, Entrinsik Informer is ranked number one for Embedded BI, Competitive Win Rate, Self Service, Sales Experience, Competitiveness, and Ease of Use. You can download a copy of the BI Survey 17 Entrinsik highlights document here: entrinsik.com/whitepapers/barc-bi-survey-17.

What would you like Spectrum readers to watch for in 2018?

We are already gearing up for a phenomenal 2018. For over thirty years Entrinsik has invested consistently in research and development to ensure our Informer and Enrole platforms remain modern, robust, and easy to use. Our R&D teams have focused on simplifying every part of both software platforms so first-time users can begin

leveraging all the features and functionality fully, with as little training as possible, to capture data, manage and explore data, build reports and dashboards for analysis, and share information quickly and easily. We are looking forward to penetrating new markets, and with over fifteen hundred customers and growing fast, we will continue enhancing our software based on market needs to build on our already excellent reputation in the market.

Ladybridge Systems Ltd

What new features or services did Ladybridge Systems Ltd introduce in 2017?

This year has seen several new capabilities added to QM as we continue to respond to requests from our users. Among the more important enhancements, we added multi-tenancing for Windows systems to allow a single Windows server to host multiple isolated QM environments. This feature has been available on Linux for some time. We have also implemented additional performance-related counters in the Hot Spot Monitor and other performance monitoring features to help developers improve application efficiency. QM now supports selection of a specific device when directing output to a printer on the client system and we have modified building of indices to process multiple indices in parallel for improved performance. On Windows systems that support the Microsoft Virtual Terminal mode (e.g. Windows 10 with the Creators' Update), a new terminal type, MSVT, allows applications to make use of the enhanced capabilities of this device on QMConsole sessions. Also, several new functions have been added to the QMClient API.

What was the greatest or most exciting thing that happened to your company or product in 2017?

The relationship with Zumasys as our sales and marketing partner continues to improve QM's position in the MultiValue marketplace. In late 2017, Zumasys announced that Uniware has been appointed to sell QM in Australia. We see this as a very important strategic move that will help us penetrate this key market and further enhance the reputation of QM in the MultiValue world.

What would you like Spectrum readers to watch for in 2018?

As always, our development process is largely driven by requests from our users but there are some projects that we expect to be completed in 2018. These include enhancements to QM's data encryption and security subsystems, improvements to the migration tools for users moving applications to QM and some new development tools. Watch the OpenQM Google group for announcements of new releases.

ONgroup Intl

What new features or services did your company introduce in 2017?

This year we deployed our first horizontal scalability for MultiValue sites with our MVON# Cluster Server, in conjunction with Microsoft tools and architecture for high availability and horizontal scaling. We added both a GUI and a BUI (browser user interface) delivered as services for MVON# Netbuilder, for those coming from SB+ to .NET. We also enhanced our MV# Developer Studio, delivering version 2.0 for maintaining and compiling (transpiling all MV code to C#) for running in .NET. This tool has served as an IDE for those bringing

SB+ applications to .NET, and this year we enhanced it so it is also used as a contemporary editor for any MultiValue site running their MV BASIC applications in .NET. We enhanced the MVON# Changeover Administrator to include GUI versions of tools previously only available at the TCL prompt, such as the development of read/write SQL Views of MV data. We developed the MVON# Profiler tool for seeing what is happening when your app is running. We are very close to announcing it, so more information will come in 2018.

What was the greatest or most exciting thing that happened to your company or product in 2017?

This is the year we installed the first U.S. companies using MVON# to run their applications on a Microsoft platform. We had some work to do behind the scenes to be able to deliver MVON# internationally, beyond Africa where it was developed. So, this is the first year that any U.S. companies have seen their MultiValue applications running directly in .NET with SQL Server as the DBMS. We are always delighted when people tell us how they can see the usefulness of their applications and value to their companies, even the value of their companies, increase with this approach. It has been a very exciting and pivotal year for us.

What would you like Spectrum readers to watch for in 2018?

Watch for MultiValue shops to be right there with the rest of the industry, running on the best industry platforms. MultiValue is then a framework or toolset, rather than an operating system, as it was long ago, or a DBMS, as it often is today. Look for MultiValue running inside standard run-time machines, such as .NET (using MVON#)

or the JVM (used in some application-proprietary cases, such as Temenos with TAFJ). Now that mainstream DBMS tools are working with NoSQL data as well as SQL data, using DBMS products such as SQL Server or Oracle for MultiValue application aligns well with industry directions. Look for sites to no longer have to choose between SQL and NoSQL approaches. Data can be projected handily for both. Sites will now be adding MultiValue tools to the Microsoft platform rather than maintaining proprietary MultiValue platforms. Watch for this sea change for MultiValue.

Rocket Software

What new features or services did your company introduce in 2017?

2017 was an important year for Rocket Software MultiValue products. We augmented the functionality of our award-winning UniData MultiValue Database, part of the MultiValue Application Platform, with the addition of Python programming support and audit logging capabilities. These enhancements expand the potential user base for UniData and improve the ability to recruit new development talent, and allow users to easily establish configurable histories of interactions, events, and activities. The inclusion of Python support opens up MultiValue databases to architects and programmers who use one of the world's most popular languages, helping organizations that rely on MultiValue to expand their hiring base. In addition, because companies must conform to audits in multiple formats and from various organizations, audit logging lets UniData users create audit histories to help meet standards such as HIPAA, PCI-DSS, and the European Union General Data Protection Regu-

lation (GDPR). UniData, like UniVerse 11.3.1, now makes spot audits easy with more granular audit data and access to chronologically generated data, and the new software includes support for sequential file logs, creating improved performance without system interruptions.

What was the greatest or most exciting thing that happened to your company or product in 2017?

2017 was a year where the Rocket team worked closely with our customers to help them address their business needs in cloud deployment, compliance and modernization. We're proud to have won a number of awards for our solutions in 2017, including the Growth Partner of the Year award from Ellucian.

Ellucian, the leading provider of software and services built to power higher education, selected Rocket in recognition of the company's outstanding technical support for Ellucian's cloud-based solutions and for its role in helping the company transition to its current SaaS license model.

Ellucian has been a long-time user of the Rocket MultiValue (MV) Application Platform, which combines an embedded database and development platform to offer the best of traditional database management with the flexibility, innovation, and performance today's applications require. The MV integrated architecture dramatically simplifies deployment and maintenance, while the fluid and natural data model reduces the need for costly DBAs or system administrators. With its low overall total cost of ownership, the MultiValue Application Platform is making it possible for millions of users around the world to solve their critical business problems.

What would you like Spectrum readers to watch for in 2018?

No technology company can rest on its laurels and expect to thrive. 2017 was a lifetime ago, which is why Rocket is continuously investing R&D resources into our MultiValue products to help organizations solve their most vexing business and technical problems. In 2018, UniVerse will feature a Recoverable File System (RFS). Based on a 2-phase architecture, RFS ensures full data integrity and automates fast restoration in the event of an unexpected outage, such as power failure. By maintaining a persistent change log (journal), RFS can always restore quickly to the last complete transaction without lengthy manual intervention for file repairs.

Last year's UniData release included Python support, which was so successful that we will be including it in the new version of our award-winning Rocket D3 MultiValue Application Platform. The 2018 release of D3 provides a great opportunity for Rocket mvBase customers to upgrade to all of the additional benefits D3 includes at no cost. We're also continuing our focus on cloud development to support our customers' ongoing need for elasticity, provisioning and data management.

Of course, there will be many other improvements and enhancements to the Rocket MultiValue Application Platforms, and they all have one thing in common: the new features put our customers and partners first.

SJ+ Systems Associates

What new features or services did SJ+ Systems Associates introduce in 2017?

PRC has been the premier software lifecycle management solution in MultiValue companies for twenty-five years. In recent years, not only do more companies face IT audit requirements, but the maturity of our market has programmers and management alike moving to take advantage of improved processes and controls. Stir-in the challenges that come with remote and offshore teams, agile methodologies and it's easy to see why the demand for PRC has increased along with the rigor of what is demanded of it. The emergence of more tools and platforms has kept us hopping, too. Every year we focus on the compliance requirements that impact IT, trending methodologies, and new platforms. This year we continued work with Design Bais and are also working with MVON#. Our goal is to make PRC available on any MultiValue platform.

What was the greatest or most exciting thing that happened to your company or product in 2017?

The most exciting story for us, and for lots of other folks in this space is the renewed excitement and commitment from companies toward their MultiValue solutions. Debate has raged about the future of our beloved environment. Somehow it has continued to endure. I believe we have turned the corner on 'endure' and into 'prevail' territory. That's great news for all of us.

What would you like Spectrum readers to watch for in 2018?

Momentum. The business world changes quickly. The thing that hasn't changed is this little engine of change, itself. The light-weight agility of MultiValue coupled with its flexibility to work with other tools and databases will give MultiValue — and those of

us working with it — a much wider reach.

Zumasys, Inc.

What new features or services did Zumasys, Inc., introduce in 2017?

MV Connect: MVConnect is an exciting new tool that enables you to connect your MultiValue application to RESTful Web Services. MVConnect empowers you to create modern, browser-based user interfaces based on today's Web frameworks, such as Angular JS, and integrate with popular SaaS-based applications like Salesforce and NetSuite. MVConnect is available for jBASE, D3, Universe & Unidata.

jBASE 5.6.2: The latest release of jBASE, our powerful MultiValue database management system, now includes native encryption, granular audit logging, improved transaction journaling, and native RESTful WEB Services (MVConnect is bundled for free with jBASE).

Earlier this year, we graduated our first class of Pick MultiValue students from Ivy Tech Community College in Bloomington, Indiana. Students in Ivy Tech's Software Development certificate program can now simulate real-world programming scenarios using jBASE. With training and assistance from Zumasys and Cook Medical, Ivy Tech Community College developed a curriculum that challenged students with problem-solving projects to prepare them for careers in manufacturing management at companies such as Cook Medical.

What was the greatest or most exciting thing that happened to your company or product in 2017?

We are most excited about the release of MVConnect, which will revolutionize how businesses think about evol-

ing and enhancing their MultiValue systems. Using MVConnect, you can now integrate your MultiValue database, which contains decades of business rules and historical data, with new web services. Despite the power and flexibility of MultiValue databases, many have dated interfaces. MVConnect changes that, bringing MultiValue into the twenty-first century. Even better—MV Connect can be used with all major Pick databases and costs less than three thousand dollars.

What would you like Spectrum readers to watch for in 2018?

In 2018, we will release jBASE 5.7, which brings several major enhancements, including Dynamic Objects and Dynamic Files. jBASE sales reached record levels in 2017 and we are committed to delivering more features than any other MultiValue database platform while keeping prices 20% to 30% less. We will also be releasing AccuTerm 8, the latest version of our popular terminal emulation software. AccuTerm 8 will include exciting new features, such as AccuTerm ReZume, which provides session persistence and auto reconnect, eliminating the problem of lost sessions and hung ports. This is particularly useful for cloud customers and users working at remote branches which rely on slow or unpredictable internet connections. With ReZume, if you are disconnected from your Pick database, your session is automatically reconnected and you can pick up right where you left off. Other new features include tandem session replay, session recording, and enhanced encryption. AccuTerm 8 will also move to a cloud subscription licensing model, which will enable us to provide continuous updates and telephone support. **IS**



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Using Saved Lists at the Linux \$ Prompt

BY KEVIN KING

Expanding Your Toolkit is an occasional series which helps us integrate the MV and non-MV aspects of our jobs.

While I spend a majority of my working life in Multivalued — Unidata, specifically — I spend a good amount of time working in other environments as well. One of my favorite features of MultiValue that I miss in other environments is saved lists. I can't tell you how many times I've been working in a Linux shell and thought, "if only I had a saved list of items, this would be so much easier."

I recently needed to verify the compile dates on a list of items in a very cluttered program file. If only I had a saved list of the programs in Linux! With a saved list I could get my list, list the file and check the compilation dates on the items. But we can't do saved lists at the \$ prompt in Linux. *Or can we?*

Spoiler alert: We CAN. Okay, so maybe it's not saved lists in the traditional MultiValue syntax, but we can do the same *kind* of thing quite easily.

Recently I needed to list the compile date of approximately 20 programs

Simply replace the variable with some letter or word and then use that variable between the do and done. That's it.

in a directory. To do this, I created a file in /tmp called `list` and cut-and-pasted the program names into this file, one program name per line. With this file in place, I used `cd` to get into the directory and then issued this command:

```
cat /tmp/list | xargs ls -l
```

The `xargs` command means "expand arguments." For each line in the /tmp/list file, `xargs` will add the file names after the `ls -l` up to the *globbing limit*, that is, the maximum length of a single shell command. If Linux runs out of space for the command before it runs out of names to add to the command, it'll reissue `ls -l` followed by the file names, again and again, until the list of names has been fully consumed.

This is just one way to use the `xargs` command. A little time with the `xargs` man page can reveal a number of other useful nuggets.

While this was useful, what I *really* needed was the compilation dates on the items, not the last update date on the source. And being just a little bit lazy, I really didn't want to have to go back and add an underscore in front of each item I had pasted into the /tmp/list_file (Unidata stores compiled code in the program file with an underscore in front of the name).

So rather than use `xargs`, I decided to use a for-loop instead. In my opinion, the for-loop is one of the most powerful shell scripting tools available, made even stronger by the fact that you don't need to create a shell script to use it. It works just as well from the command line.

The basic syntax of the for-loop looks like this the code in [Figure 1].

```
for variable in `command` ; do  
  shell commands using $variable  
done
```

Fig. 1

PICK/U2 Resources Available

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Simply replace the variable with some letter or word and then use that variable between the do and done. That's it. For my particular dilemma — finding object code for the list of source items in /tmp/list — the command was as simple as:

```
for i in `cat /tmp/list` ; do
  ls -l $_i
done
```

And yes, this is entered directly at the \$ prompt! Here's how it works:

The backtick (`) operator runs a command. For each entry (variable i) in the result set, the scripting commands between the do and done are executed. The value of each entry in the result set (i) can be retrieved as a standard environment variable using \$i. In this case, the loop expands to:

```
ls -l _item_1
ls -l _item_2
ls -l _item_3
...
ls -l item_n
```

The net result is that any list of items in a text record can be used as a saved list either through xargs or using a for-loop. Just because we're at the \$ prompt shouldn't limit us from some of our MultiValue goodness. **IS**



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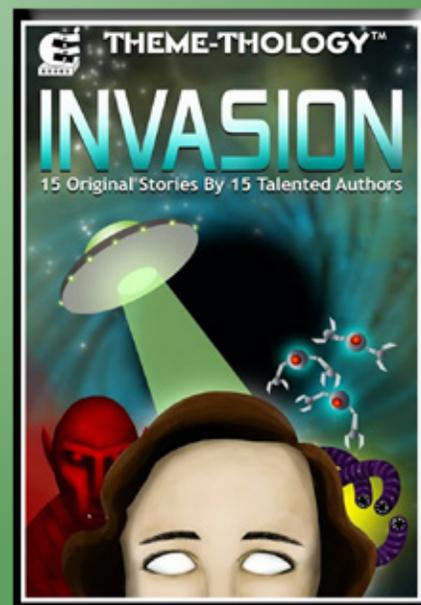
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FROM THE PRESS ROOM



Entrinsik Informer in the BARC BI Survey 17

The BI Survey 17 is based on findings from the world's largest and most comprehensive survey of business intelligence end-users. The Survey was conducted by BARC from March 2017 to February 2017. Altogether, 3,066 respondents worldwide answered a series of questions about their BI software. The survey offers a comparison of forty-two leading business intelligence tools across twenty-nine different key performance indicators including business value, customer satisfaction, customer experience and competitiveness. For more information, go to www.bi-survey.com.

Informer was "Top Ranked" as #1 in six separate categories this year, including Self service, Embedded BI, and Ease of use. The Survey includes detailed survey results and analysis of Informer ratings in areas including user and case demographics and category rankings compared to other participating vendors in the BI space.

Across all its three peer groups, Entrinsik Informer is ranked number one for 'Embedded BI' and 'Competitive Win Rate'. Compared with

other dashboarding-focused products, Informer is ranked number one for 'Self Service', 'Sales Experience,' and 'Competitiveness', in addition to seven other leader positions. Informer also achieved a top rank for 'Ease of Use' in the 'Self-Service Reporting Focused Products' and 'Americas Focused Vendors' Peer Groups. In those two peer groups, Informer also attained several other top ranks and leader placements. ■



ONGroup Provides MultiValue Applications with Horizontal Scalability

ONGroup announced two sites running their own MultiValue applications with horizontal scalability as well as high availability. Horizontal scalability provides databases the ability to increase capacity by connecting multiple hardware or software entities together to work as a single logical unit.

MVON# Clustering Server includes the ability to have as many nodes as required. Nodes can be added and removed in real-time, and each node can be configured with different RAM, disk, and processors. You can define Pri-

mary, Secondary, and Tertiary lock servers.

In addition to the gains from high availability and interoperability when running a MultiValue application in .NET with the MultiValue data, working with full MV read/write and full SQL read/write from SQL Server, the ability to horizontally scale applications is a big gain for MultiValue applications using Microsoft as the platform when running with MVON# tools. This is also a significant feature that differentiates the Microsoft platform with MVON# from other MultiValue options.

ONGroup Intl is pleased to be able to deliver horizontal scalability for MultiValue applications using the MVON# Clustering Server, now available internationally. ■



Synergetic Data Systems Release CirrusPrint 2.0.10

CirrusPrint 2.0.10 includes new features as well as bug fixes.

CirrusPrint 2.0.10 added an option to disable cache usage for any location, so that locations with high bandwidth, which might not benefit from object caching, can disable it and receive jobs without the parsing time.

CirrusPrint 2.0.10 added a filter configuration capability to

output devices. Any program capable of processing an input file and producing an output file can be used to modify the inbound file data. A good example is the use of UnForm to enhance ERP documents going through CirrusPrint, to add features like barcodes, images, attachments, or tray and duplex control.

CirrusPrint 2.0.10 added the network hostname to the subject of notification messages, to help identify what machine is sending a message to an admin. ■



Welland Company and Enerpact Join Forces for Goodrich Petroleum Corporation

Goodrich Petroleum Corporation is an independent exploration and production company engaged in the exploration, development and production of natural gas and crude oil in Eagle Ford, Haynesville and Tuscaloosa Marine Shale.

Goodrich is an industry leader with their innovative business strategy of maximizing the value of their existing assets with the lowest risk and highest potential rate of return. They concentrate their efforts

FROM THE PRESS ROOM

in areas where they can apply their technical expertise and have significant experience.

The critical goals of maximizing cash flow margins and maintaining a conservative capital structure required a top-notch accounting solution with customization capabilities for their unique business structure and needs. It was clear their current Excel based modeling was not sufficient to accommodate the dynamic nature of their industry.

Enter Welland Company and Enerpact

Welland Company's EXPORT™ is a versatile tool used to extract data from U2-based systems. The robust software quickly and easily pulls data and translates it into an industry-standard format. This "industry standard" opens the door to much more functionality. Having the data in a SQL-compliant database means it can be easily integrated with other systems for data mining, data warehousing and data web-enabling.

For Goodrich, the best solution for the remaining system needs was Enerpact's UpStream 360°. Enerpact is the only company to offer a comprehensive range of highly customizable solutions to the upstream oil & gas industry that bridge the silos of accounting, reservoir, engineering, production, land, and financial systems. Upstream 360° connects data from all your E&P systems, enabling a 360 degree view of the

business. It is completely compatible with your existing software for accounting, production, engineering, land, finance and reserves management.

The ease of integration and compatibility between EXPORT™ and Upstream 360° creates a first class solution for Goodrich. It simplifies their modeling process allowing them to focus on their business and be more effective in developing their future strategies. ■



Uniware Appointed as a Distributor of Zumasys' Full Suite of MultiValue Software Products

Zumasys announced it has appointed Uniware Pty Ltd, a national provider of MultiVal-

ue software and services as a distributor for Australia and New Zealand.

"Zumasys and Uniware are totally aligned on our vision for the future of Pick," said Paul Giobbi, President and Founder of Zumasys. "As an established Independent Software Vendor (ISV) and IT/cloud provider, Uniware will help us spread modern Pick database software and services to the Australian market."

Australia was one of the first countries to embrace MultiValue databases. Now, there are hundreds of organizations with aging databases and resource shortages who are looking for modern features and user interfaces to protect and modernize the many years of investment in their intellectual property. Zumasys' software solutions can provide this. "We are excited to now offer these solutions and associated services to the Australian market place," said Craig Alford, General Manager of Uniware.

Through the agreement, Uniware will now resell Zuma-

sys' full suite of MultiValue software products, including jBASE , OpenQM , AccuTerm and MV Connect .

jBASE. jBASE is a world-class "native" database management system. With jBASE your programs are converted to C and there is no restrictive legacy Virtual Machine, which means applications take full advantage of the features and speed of the underlying operating system.

OpenQM. OpenQM offers a cost-effective, high-performance environment in an extremely efficient footprint for a fraction of the cost of other MultiValue database environments.

AccuTerm. The leader in terminal emulation, AccuTerm software allows customers to access their MultiValue applications – on-premises or in the cloud – from any Windows device.

MV Connect. RESTful services and modern web development capabilities for all flavors of Pick MultiValue including D3, U2, jBASE and OpenQM. ■



AccuTerm® software, the leader in terminal emulation, allows you to access your MultiValue application—whether it is on-premises or in the cloud—from any Windows device.

www.zumasys.com/accuTerm

Clarke Transport Migrates to jBASE

At the heart of Clarke Transport's UK business is a powerful transportation management system written in Pick BASIC. Leveraging the power of the Multi-Value data model, the company, based in Birmingham, has continually modified and enhanced its application over the course of 30 years. The result is a feature-rich application with a modern interface. However, after hiring a series of new developers, Clarke Transport decided to embrace jBASE for its native Windows capabilities, which makes it easier for programmers without MultiValue knowledge to master the environment.

Tell me about Clarke Transport. What is it that you do?

JASON: Clarke Transport is a regional provider of delivery, warehousing, and transportation solutions. We specialize in transporting hazardous freight, such as chemicals and paint. We're a family-run organization, founded in 1933 as the first direct road service between the industrial Midlands and Scotland. We employ over five hundred people across seven sites in the UK.

How do you use jBASE today?

GARETH: jBASE is absolutely at the core of everything we do at Clarke. Our transport management system pretty much runs our entire business. All our jobs, consignments, routing, scanning, and invoicing is handled

through that system, which now runs on jBASE. We also have external websites that connect to jBASE so our customers can enter jobs themselves. Without our transport management system, we wouldn't have a business.

Why did you choose to move to jBASE?

JASON: Clarke had been running our transport management system on Pick for thirty years — way before our time. But we were looking for a solution that was on the leading edge; something that would allow us to be more forward-looking with our development.

We were also having lots of stability issues with our older Pick system. We were experiencing crashes every other month, which, for a system as critical as ours, was not acceptable. Our trucks are operating twenty-four hours a day, so even a minor disruption to our systems can be a significant disruption to the business. Customers aren't going to want to use your service if they can't rely on you. You can't run a business like that, especially when you're trying to grow in the industry.

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What has your experience been using or since moving to jBASE?

GARETH: The biggest benefits with Zumasys and jBASE are stability and flexibility. The MultiValue community is small, particularly in the UK. One of the key advantages of Zumasys is that we can leverage its large support team without having to go through a middleman to diagnose issues. Zumasys provides the twenty-four hour, globally available coverage we need to compete in our industry. With Zumasys, we can phone-in and speak directly with someone who can help us solve our problem immediately.

JASON: We've completely gotten rid of the stability and crashing problems we had before. With jBASE we also get the full benefits of virtualization, including real disaster recovery. Before, we were backing up from a

physical AIX server to tape at a remote location. Our jBASE solution now runs on Windows Server using Hyper-V virtualization. jBASE automatically replicates data to our remote site, so in the event of a failure, we can just spin up the virtual server on the other side and away we go.

How does jBASE RESTful services help you recruit development talent?

GARETH: Our Pick developers were starting to reach retirement age, and we were having trouble finding new programmers. With jBASE, we can attract the next generation of developers because they can come in and use jBASE natively using RESTful services. We can hire a web developer who doesn't know anything about MultiValue, and as long as we can give them the interfaces to talk to, they can create a website that talks to jBASE.

jBASE gives us the ability to talk to modern technology using RESTful services and various other connecting modules within jBASE. This dramatically increases our throughput and speeds up development time. Now we can do a lot more web integration that, while possible to do with our older version of Pick, was a lot slower and more expensive.

For example, our order-booking website that talks to our MultiValue database was previously very difficult to develop. Now with jBASE and RESTful API services, web developers can easily make changes and enhancements. They can spend less time trying to navigate the system and more time creating fast, responsive websites, which is what our customers want. Development goes a lot faster and is a whole lot more affordable. **IS**

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the letters or the
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UX/UI Part IV

Kansei Engineering

BY CHARLES BAROUCH

If you had to define Kansei engineering in one sentence, it would be, “You should put the cup holder where the hand wants to go when the person is thirsty.” It is, like Feng Shui, a philosophy which drives design decisions. The difference is that Feng Shui is driven by the positions of the heavens, but Kansei is driven by empathy.

When we design that next desktop GUI, mobile app, web page, or even green screen, we need to consider what philosophies drive our design decisions.

True Story

Recently, I had the chance to do what I rarely get to do: redesign something from the ground up. My last several passes on this project were a gradual transformation of what the last programmer/analyst/designer did. His view was based on negotiations with the same people I was working with, so that was the prudent course.

Compliance, changing needs, and new demands on the process, all worked together to create the opportunity to create something better. I chose to look at

“Who knows the answers?” “When will they know them?”

things through the lens of Kansei. Everything was on the table. I gave myself permission to blow up the status quo. If you’ve ever had the chance, I suspect you know what comes next: very little changed in a big way; everything changed in small ways.

The new project had to serve the same people who approved the old project. Kansei is about empathy. Knowing what they already like and knowing what they will already accept had to inform each decision.

Your Story

Imagine that you are tasked with writing a new billing system. Traditionally, we look at the database (MultiValue or not) and start by feeding those tables. If we need six things to create a customer in the CUSTOMER table, let’s ask those six questions. That’s not the Kansei approach.

We need to ask ourselves, “Who knows the answers?” “When will they know them?” The database needs six answers, but three come from Sales when the customer is a prospect, two come from Finance when the deal is about to be offered, one comes after the customer is officially a customer. That means that while you might have a screen (or page, or applet) with those six questions in one place — for adding-in existing customers or for editing customers — you will also spread those questions out based on “who” and “when.”

All this isn’t new. Kansei has been around since the seventies. It grew out of QFD (Quality Functional Deployment) and other related approaches. The word most people hear that relates is *ergonomics*. Since that’s the science of fitting objects to people, you can see the connection. Even before all of that, we have, instinctively, done things in this mode. Think through your career and you’ll find your own examples. The difference here is that I’m advocating that we do it consciously and with intention. Empathy as a design approach is surprisingly effective.

Near Miss

I once wrote an application using a 4GL. It allowed my users, previous green screen only, to use the mouse, to have context-sensitive help, and to see colors which highlighted the subsections of the page. It was more concise than the old screens (plural) which it replaced. I thought I had done a good thing. Then I went back and spoke with one of the operators I'd worked with while I was developing it. Her take was a little different: "I already have the phone, the keyboard, and a pen. Which hand did you think I'd be using for the mouse?"

From a strictly computer standpoint, I had achieved an empathetic design. Things were clearer, cleaner, better organized based on how they would be used. From a larger perspective, I had added a step (the mouse) which was non-empathetic. It was fixed by adding keyboard shortcuts. You could still use the mouse, but it became optional, used for edits and corrections after the phone had been hung up. The keyboard was within reach, using it differently was within their comfort zone. Kansei favored the keys. While I should have seen that sooner, at least it was seen in time. The version we launched worked as they needed it to work.

And Another Thing

Another time I was in a meeting on automation. The obvious Kansei answer was to reduce the human steps to zero and make everything work in the background. We chatted back and forth excitedly, the department head and I. Then a co-worker stopped in and looked at our brilliant idea. "You know, the human is the only point of security in this process, right? Can't

cut them out or we will be open to database corruption."

So, empathy is not the whole equation. We need to service the user of the process, whatever form or method of process it is, but we also need to serve the business function, the database requirements, the law, and every other need. Kansei isn't about ignoring the rest, it is about focusing on the user experience while supporting and accomplishing the rest.

A Dash Of

You might also get the idea that Kansei is just about organizing inputs. Ask this here, that there. There's more. Consider dashboards. When is the car dashboard, or a BI (Business Intelligence) dashboard useful? When it shows you what you need to know when you need to know it.

Showing someone their hotel bill on the same page where they approve the purchase, that's Kansei. Any process where you put facts at their fingertips, as the saying goes, is part of it.

Showing the theater manager a dashboard with next week's schedule and this period's earnings helps them plan hours as a function of expenses. Adding a chart of upcoming movies would create a more complete view. Thinking about what the user needs is core to this philosophy.

The Secret Ingredient

There's one word that I've left out in this discussion. Some of us in tech aren't so good with it, but it belongs in the definition of Kansei: Feelings. This is why the word empathy comes up in this article. While we tend to think of business and computers as analytic, cold things, Kansei is warm. It is about making the user feel specific things. We have to go beyond not-frustrating

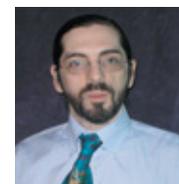
and marginally-better, and try to make people actually like the results.

Words like "satisfied" or "happy" need to be in your approach. This is about making something with the marketing built-in. I often talk about games in this column because games make you want to use them. They make you want to press here, slide there, tap-tap-tap in rapid succession. While most people won't get the same rush from keying a thousand phone orders that they'd get from beating that last wave of aliens, we can aspire in that direction.

When executives talk about changing out a computer system, or a website, or any tech, you hear feelings in the conversation. They talk about ease-of-use, speed, modernization - but those are often based on emotional responses. When someone sells a new system, they usually do it by appealing to emotions. Kansei makes what you do appealing.

The Takeaway

It is common in the MultiValue world to bash SQL for being too computer-centric and not human-centric. Kansei is the next logical step in making software more human-centric. Shifting our thinking can lead to a more positive work experience; for the users and for you. **IS**



CHARLES BAROUCH is the CTO of HDWP, Inc. and the Publisher at HDWPbooks. You can read his writing in

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