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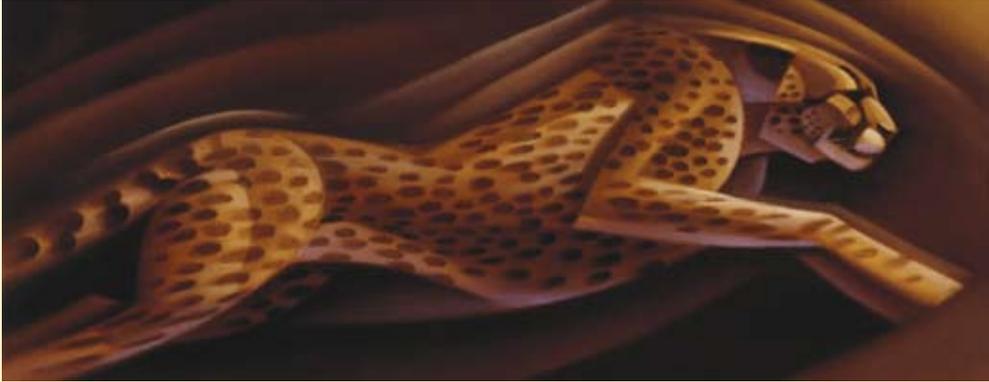
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INTERNATIONAL Spectrum

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6 2010 International Spectrum Conference

Feedback In previous issues we have usually published a recap of what happened at that year's International Spectrum Conference, sometimes giving a summary of the various sessions. These days, that information is available on the web site. So instead of repeating it, this year we focused on the attendees and asked some of them what they thought. **BY CLIFTON OLIVER**

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From the Inside

BY NATHAN RECTOR

Well, the International Spectrum 2010 User and Developer Conference (Spectrum 2010) is over, and well... it was as successful as ever.

Spectrum 2010 had many of its trademark events, as well as a few new ones. The session schedule was packed with education and how-to workshops, along with a few case studies.

We started with the welcome address, and then went directly into our two hour workshops and then the how-to educational sessions on Monday and Tuesday. During the welcome address, I talked about the upcoming enhancements to the Spectrum resources web page, including the Mobile Conference Guide (m.intl-spectrum.com) that would help attendees schedule their time.

Several attendees and speakers were tweeting during the conference. You can find this tweet history from us at: <https://twitter.com/IntlSpectrum>, and see the history from others by searching "#is2010". I was also posting on the International Spectrum FaceBook page at: <http://www.intl-spectrum.com/facebook>

The hot topics this year seemed to be Virtualization, Business Intelligence, and Mobile-enabling MultiValue data. One of our speakers actually created an iPhone webapp within hours of attending one of the sessions on iPhone Development (www.keyally.com/mobile/mvtoday.php).

We received a lot of good feedback from the attendees this year. Check out the 2010 feedback article in this issue.

I would like to thank our sponsors again for their support:

- Intersystems
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Our closing night party was our award night for the International Spectrum Awards. The nominations for the "New Technologies and Solutions Award" were Entrinisk, Pavuk, and Snuplt. The award was presented to Entrinisk.

The nominations for the "Most Valuable Professional (MVP)" were Dave Peters of Rocket U2, Rod Owens of Ashwood Computer Solutions, and Bruce Jamilkowski for Mouser Electronics. The award was presented to Rod Owens of Ashwood Computer Solutions.

Unfortunately some of our international attendees got stuck in Colorado again care of the Iceland volcano.

We look forward to Spectrum 2011. For those wondering where that may be, we are looking at Florida at this time. I wonder what kind of extreme weather we will have in 2011?

-NATHAN RECTOR
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2010 International Spectrum Conference Feedback

BY CLIFTON OLIVER

Connie Eaton, GM Nameplate

SPECTRUM: *We are talking with Connie Eaton from GM Nameplate. In our conversation last night with Nathan and Tracey, it was my understanding that you paid your own way to come to the conference this year.*

CONNIE: I did.

SPECTRUM: *You're probably one of the only people at the conference that wasn't sent by their company.*

CONNIE: Yeah. Though it's not that the company wouldn't have liked to have sent me or maybe others. We have in the past, and I'm hoping we will in the future send people. But this year and the past two years there has been absolutely no budget for anybody to go. I thought about not going, and it's been a couple years since I have gone. But there's something about being around all the people who do the same things we do. It was in Denver, which made it close enough to actually be reasonable for me, and I thought, "Yeah, I will." So I'm taking back a lot of ideas and things that I learned here to our management. And I'm going to start as soon as I get back lobbying to make sure that we send somebody to subsequent years. I was the only one in our department who could afford to foot this myself. That

is why I did it. But in the future, I think the company will send people.

SPECTRUM: *You said you have some new programmers, new young (meaning under 45 for some of us in the MultiValue community) that you would like to see come here.*

CONNIE: Under 30. And I would like to see both of them come here. One of the things I found really exciting this year was the level of excitement that people have about the future and about how easy it is to keep your business logic in the MultiValue world that we all know and love, and present it in the web, which the rest of the world knows and loves. We can kind of have the best of both worlds. There were lots of presentations here about various degrees of how to do that. That's kind of what I concentrated on here because that's our next initiative at work. We've got a big investment in our database and in our business rules. We don't want to throw that out, but we've got some of the ugliest green screens you've ever seen. People judge that by that screen and not by the content or the value of the data. So management has come around to saying, "Let's improve the user interface and keep the database, rather than going out to some SQL app or something." And that has just recently been kind of ver-

I distributed the session descriptions to the people at work and said, tell me what you think would be of benefit for me to bring back. They all read them and guided me in some directions I might not have gone.

balized in our company as a “we better think about this.” So the timing was perfect for this, even though I was coming from my own agenda. I distributed the session descriptions to the people at work and said, tell me what you think would be of benefit for me to bring back. They all read them and guided me in some directions I might not have gone, the business case stuff that Shannon did, and the make it pretty kind of stuff. I’m not sure I would have gone to those left on my own. But because there was an interest in the company to go to those, I did. So I think that’s good. And once I go back with things from here, I think it will be easier next year to send the two young guys, both of which are new to MultiValue. One is an SQL programmer and the other is a web design programmer. Both of them are learning the jBASE side of it — one is a little ahead of the other by a year or so — but both are excited about it. They see the value, see the ease of using it, see how nice the data is. So that gives me a great hope.



SPECTRUM: *So even though you decided on your own that Connie was going to Spectrum, you still took the opportunity to basically prime yourself to act as an advance scout for GM nameplate.*



CONNIE: Exactly! Because you know, I do work there. I do care about their future. So I wanted it to be as beneficial as possible, and I think it has been. I was pleasantly surprised at the width of presentations — the variety. And I had to make tough choices as to which to go to sometimes. I really did get some really good ideas to take forward. If we were going to do this, here are some options for direction. We could go and hear about it. We could talk to some people who had already done it. We could go from are we go-

ing to build our own to are we going to buy some expensive package. There were a lot of presentations that made all of that possible here, and I think it would have been very difficult to get the possibilities concentrated in a short period of time if I had gone out and just done research.

SPECTRUM: *It sounds like GM Nameplate as decided that not only the data but especially the — how many years accumulation of business logic...*

CONNIE: Oh, 30 or more.

SPECTRUM: *30 or more years of business logic that your MultiValue system contains actually provides you a noticeable competitive advantage.*

CONNIE: Well, I think so. I think they realize that. We are customer driven. We’re an on-demand manufacturer. We don’t make things for resale. We make things because you want something for what you’re building. And so we have to respond pretty rapidly as our customer’s needs change. And I

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2010 International Spectrum Conference Feedback

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think it's recognized within the company that that rapid response would not be as easily possible with one of the standard type databases — Oracle or DB2 or something like that. I think they realize that having the responsiveness that a MultiValue system gives you is an asset to them. And we can respond to a customer's need where it's only one customer's need, but we can come up with something for that and implement it quickly. Our customers are happy about that.

SPECTRUM: *You just came from the vendor exhibits. What did you think of that? Did you find anything that you might be considering?*

CONNIE: Yes, I did. The fellow that presented at the breakfast this morning

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David McGee DCS Information Systems

SPECTRUM: *We are talking with David McGee from DCS Information Systems. Where is that?*

DAVID: Plano, Texas.

SPECTRUM: *How has the conference been for you? Did you get out of it what you had hoped for?*

DAVID: Yes, I did. I thought the selection of topics was excellent. I've heard a lot of buzz around me of people saying they got a lot interesting information to carry home that was very timely, and I will agree with that. That's what I told Nathan.

SPECTRUM: *What in particular was it that caused you to decide to attend?*

DAVID: In my case, jBASE 5 and mv.NET. Talking to the people.

SPECTRUM: *Talking to the vendors?*

DAVID: Yes.

SPECTRUM: *And did you get the information that you were looking for?*

DAVID: Yes. I did.

Leif Nelson Landcar Insurance Services

SPECTRUM: *We are talking with Leif Nelson of Landcar Insurance Services. How was the conference for you? Was it useful?*

LEIF: It was good. It got me exactly what I was looking for.

SPECTRUM: *And what was it that you were looking for that made you attend?*

LEIF: Well, actually I come every year because there's no better place as a clearing house of what's out there for MultiValue. Like last year, we were looking for ways of printing reports. We wanted to make it easier for users to do their own reports. This year we're planning on redeveloping one of our main products. So I was looking for ways to speed up that development. And I've got some competing viewpoints I've got to work out now, but I've got different vendors who can help me. Now it's a question of sorting through the data and deciding which is the most likely to be of value.

SPECTRUM: *And you got that information?*

LEIF: I got that information through both classes and on the floor. I talked with people at the preview party, went to their classes, and talked with them again the next day.

SPECTRUM: *So you would say that your goal was met?*

LEIF: Very well, actually. Yes. It was quite worthwhile.



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could click through to a story about how Google was changing their name to Topeka. In the middle of the story, near the part about their joint effort to colonize Mars, was a warning that it was improper usage to say, "I topeka'd him on Alta Vista."

The People are Revolting

Of course, we all think of ourselves as independent thinkers, and while we all know that advertising and other marketing activities impact our actions, we hate to think that they have that much influence. The sad fact is that they do.

Tune into Jon Stewart and count the number of times he runs a clip of a Fox News anchor saying something followed by a clip of a Fox News viewer expressing the same opinion word-for-word. Of course, I'm not one of those mindless zombies, I just quote Jon Stewart verbatim... wait... oh. To be fair, a lot of this sort of parroting comes from us pre-selecting our brain

People don't just mindlessly repeat anything. They mindlessly repeat things said by people they generally agree with on multiple topics.

washers. People don't just mindlessly repeat anything. They mindlessly repeat things said by people they generally agree with on multiple topics. So, we aren't being zombies. We are selectively using professional talking heads as our personal speech writers.

The People are Revolting

That last sentence is something we in Marketing call spin. Taking a negative and rephrasing it as a positive is not new. I was once discussing database technologies with a friend, and he

asked about a certain functionality. I pointed out that the database in question couldn't be made to do that, and he corrected me. "It's not that it can't do it, it's that people who use this database are protected from having to do that."

I was in a meeting once where it was suggested — as a negative — that the U2 User Group was giving a voice to people who use the product but have stopped paying maintenance. I responded with, "Sure. But to get the features and updates they are proposing, they'll have to go back on maintenance. We are giving you a focus group and a chance to regain existing customers." Clif Oliver, who was sitting in on the meeting, started laughing so hard that he nearly choked. He knows spin when he hears it.

This last example clearly illustrates that spin is not lying or even misrepresenting. Everything I said was true,

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OpenXML Part II

Reading Data from Excel

BY BRIAN LEACH

In the first article in this series, I discussed the top level structure of an OpenXML document and the Open Packaging Convention. In this article, we move on to consider OpenXML formatted spreadsheets as used by Microsoft Excel.

Third party solutions aside, there are three main techniques for reading an Excel 2007 document: treating the content as raw XML after unpacking through the .NET framework System.IO.Packaging library; unzipping and navigating the documents in Basic using tools such as the XDOM parser built into UniVerse and UniData; or using the newly released OpenXML SDK 2.0 from Microsoft. Each of these gives a slightly different abstraction over the underlying XML, but in all cases you still need to have a reasonable understanding of the SpreadsheetML schema.

You may reasonably ask why you should consider directly reading and writing OpenXML when Excel can import and export XML data so readily. OpenXML format is the native spreadsheet format for Excel 2007 forward and includes all the regular features such as formulae, styling,

multiple worksheets, support for charts and embedded objects. As with all OpenXML, you do not need Excel to be present to read or write the document content.

Reading the Worksheet

OPC is a zipped format, and neither UniVerse nor UniData directly supports zip functionality, but you can easily create a verb pointer to a suitable unzip routine. In figure 1, I am using the command line add-on available for registered copies of WinZip.

As you saw in the first article, an OPC document is made up of multiple parts, each of which is connected to the document through a hierarchy of relationships. The `_rels\rels` document defines the entry point for our workbook through an officeDocument relationship (fig. 2).

```
>ED VOC WZUNZIP
0001: V
0002: C:\Program Files\WinZip\WZUNZIP
0003: U

>WZUNZIP -d "c:\temp\data.xlsx" "c:\temp\data"
```

Fig. 1

```

<Relationship
  Id = "rId1"
  Type = http://schemas.openxmlformats.org/officeDocument/2006/relationships/officeDocument
  Target = "xl/workbook.xml"/>

```

Fig. 2

The workbook.xml defines global information and in turn references one or more worksheets. These can be found in the xl\worksheets subfolder, again indexed by a relationship document usually named xl\worksheets\workbook.xml.rels. Of course, if you already know the structure of the document you are importing, you can jump these to go direct to the content worksheets, but otherwise following the links — though painful — is safer and highly recommended.

Parsing the Spreadsheet Data

Unlike word processing documents, the spreadsheet mark-up is relatively easy to parse, largely because the spreadsheet schema divides the data content from the presentation and styling, making it easy to locate and parse the content.

The UniVerse Basic snippet shown in figure 3 loads a worksheet location into the built-in XDOM parser and returns the sheetData element that encloses this data content.

A spreadsheet presents data in a tabular format, and so within the sheetData element the data content is simply presented as a series of row elements, each of which is then divided into a number of cells (identified by a c element) (fig. 4).

An important point is that each cell contains its reference address in the 'r' attribute. This is given in the A1 format

```

Content = ''
OpenSeq Worksheet to IFL Then
  Status FStat from IFL Then
    ReadBlk Content From IFL, FStat<6> Else
      Content = ''
    End
  End
End
CloseSeq IFL
DefaultURI = 'xmlns="http://schemas.openxmlformats.org/spreadsheetml/2006/main"'
Content = Change(Content,DefaultURI, '')
If XDOMOpen(Content,XML.FROM.STRING,hDOM) = XML.ERROR Then
  Crt "Cannot open DOM "
  STOP
End
If XDOMLocate(hDOM, "/worksheet/sheetData","",hSheet) = XML.ERROR Then
  GoSub DoError
  Return
End

```

Fig. 3

```

<row r = "1" spans = "1:37">
  <c r = "B1" s = "16" t = "s">
    <v>101</v>
  </c>
  ...
</row>

```

Fig. 4

```

/worksheet/sheetData/row/c[@r='A1']

```

Fig. 5

```

For Row = StartRow To EndRow
  For Col = StartCol To EndCol
    Address = Char(64 + Col) : Row
    XPath = "row/c[@r='':Address:'']"
    If XDOMLocate(hSheet, XPath, '', hCell) # XML.ERROR Then

```

Fig. 6

familiar to Excel users, and should be used for searching if you want to locate specific cells using XPath, or for performing string searches directly in Basic. XPath is an industry standard and platform-independent means of querying an XML document that can be used to identify nodes based on a path-like syntax combined with operators that can be applied to filter elements or attributes. The XPath expression shown in figure 5 could be used to locate a cell named A1, for example.

XPath is part of the UniVerse XML support, so the simplified snippet in figure 6 illustrates one technique for extracting a range of cells.

Not all cells will be present in the worksheet. If cells have been merged, the individual cell elements may remain intact in the document, but only the first merged cell contains any data; and cells that have no values may be omitted, which is why it is important to use the cell references rather than treat them as a contiguous array within the row.

Fetching Cell Content

Of course it would not be OpenXML without a few complications. To parse the content of the cell you must also consider the content type, as specified by a "t" attribute. This determines the format of the data, the element used

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OPENXML PART II: READING DATA FROM EXCEL

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to encapsulate it, and the location for shared data.

Regular string data is held in a text element enclosed in a <t> tag. Numbers, dates, times and Boolean values are held in a value element, identified by a <v> tag (fig. 7).

```
<c r = "A1">  
  <v>101</v>  
</c>
```

Fig. 7

Dates and times are held in internal format similar to MultiValue systems, though with the offset for dates starting from 01 Jan 1900. To convert these into the equivalent PICK format dates you will simply need to subtract 24837 days. Surprisingly perhaps, Excel actually does not differentiate between dates and other numeric values, other than in the presentation format of the cells. Boolean values (t="b") are stored with 1 representing True and 0 for False. All of these can be neatly extracted and converted using the regular XDOM functions or Basic string parsing.

Not all of the data is held directly in the worksheet part, however. A table of shared strings is exported into a separate document part xl/sharedStrings.xml (fig. 8).

Where Excel has identified that two or more cells have the same value, it may give these cells a type of 's' (shared string) and reference the ordinal position of the string in the sharedStrings table. In figure 9, cells A2 and A3 reference the same entry 'Shared String'.

Parsing Formulae

Reading stored values is all well and good, but what about cells whose content is the result of a calculation? Or what if you want to generate a formula when building an Excel worksheet? Cell formulae are held in the cell within an <f> tag. Fortunately when parsing

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```
<sst xmlns = http://schemas.openxmlformats.org/spreadsheetml/2006/main
count = "6" uniqueCount = "3">
  <si>
    <t>Shared String</t>
  </si>
  <si>
    <t>Yes</t>
  </si>
  <si>
    <t>No</t>
  </si>
</sst>
```

Fig. 8

```
<c r = "A2" t = "s">
  <v>1</v>
</c>
<c r = "A3" t = "s">
  <v>1</v>
</c>
```

Fig. 9

```
<c r = "B1">
  <v>1</v>
</c>
<c r = "C1">
  <v>3</v>
</c>
<c r = "D1">
  <f>B1+C1</f>
  <v>4</v>
</c>
```

Fig. 10

data, you do not need to re-evaluate the formulae since the last calculated value is also provided as shown in figure 10.

So you now know enough to begin extracting content from an OpenXML spreadsheet document, whether using client tools or directly from within the database.

Updating an existing spreadsheet is equally straight forward, so long as you first build a template. You can simply fill or extend the sheetData section without having to worry about shared strings and can use the template to

provide the styling information. Just remember when it comes to packaging that not all zip programs are compatible with the OPC format.

If you are going to start generating spreadsheets or other documents from scratch, or do not have a compatible zip to package up the document parts, these are matters that lend themselves better to the OpenXML 2.0 SDK. We will turn our attention there for the third article in this series. **IS**

BRIAN LEACH is an independent Multi-Value consultant and author living in the UK. He is current president of the International U2 User Group. For more information please visit www.brianleach.co.uk



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Entrinsik, Inc. announced an agreement with AVATECH, a leading provider of high quality IT solutions for the industrial, governmental and educational sectors, for the distribution of Entrinsik's Informer Web Reporting software to new customers and partners throughout Europe. Informer is a powerful web-based reporting and analysis solution that provides technical, business, and front-line users with real-time access to information from multiple systems, platforms, or locations.

AVATECH was selected to join the Informer Partner Network based on their proven track record of distributing leading edge software and service products. Additional factors include AVATECH's ability to make an immediate impact in the marketplace, as well as their reputation for high quality service and support.

Neil Tiver, AVATECH's Product Manager says, "Informer is one of the most innovative and exciting software solutions I've seen. Offering Informer along with our solutions enables our clients to easily perform reporting and

analysis against key operational data to improve data flow efficiency and accuracy whether they are at the office or on the go."

By partnering with Entrinsik, businesses that rely on AVATECH solutions to run their business now have a single point of access to reports where they can query any data source, regardless of where it is stored, in real time. And self-service report customization and ad-hoc analysis capabilities for end users ensure the information is presented based on individual needs.

"AVATECH expands Entrinsik's Informer distribution into the second largest IT market," says Doug Leupen, President and CEO of Entrinsik. "With Informer's outstanding success in North America, UK, and Australia, we are confident and excited about the upcoming market penetration Informer will find in Europe with AVATECH as our distributor."

About AVATECH

The AVATECH Company was founded in 1982 with Headquarters in Volketswil ZH, Switzerland. AVATECH offers innovative software solutions and tools in the IT sector. AVATECH already has an excellent name for professional software tools: PC Remote Control, Remote Access and several products in the field of PC based education are first-class tools sold chiefly to companies, authorities and schools. As a Rocket Master VAR, AVATECH offers professional developers software for application development, data-

bases and web integration tools. For more information, visit www.AVATECH.ch.

Entrinsik, Inc.

Since 1984, Entrinsik has been developing, implementing, and supporting database solutions that enable organizations to maximize performance and improve bottom lines by tracking, understanding, and managing information. Thousands of technical and business users around the world utilize Entrinsik's Informer Web Reporting software to natively extract data from production databases, providing a single point of Web-based access to customizable reports for real-time reporting and analysis. Entrinsik is headquartered in Raleigh, NC. For a demonstration of Informer or a free trial, call us today at 888-703-0016 or visit www.entrinsik.com. ■



Johnson Matthey Precious Metals Division Uses Universe To Manage Its Disaster-Recovery

"Our group has operations in Salt Lake City, Utah and Brampton, Ontario, and we needed to make sure that all of our information was in sync in real time and that all of our locations were re-

dundant" says Dennis Smith, the financial and administrative controller for the catalyst, chemicals and refining unit in North America. "There are a lot of complexities in the precious-metals refining arena, and our custom built system - built on Pick - had been running in conjunction with our accounting software for more than 25 years. Three years ago we switched to a new accounting system, which ultimately led to our decision to update our data-management software. We needed a database solution that was robust enough to meet the corporate initiative for data security, and UniVerse offered the functionality we needed."

Smith's team turned to Toronto-based Asynchron Systems Inc., which specialises in the development of custom software solutions in the multivalue environment, to implement a solution that would meet Johnson Matthey's corporate mandate to cross-replicate data in multiple sites. Asynchron founder Seth Blumenstein says, "This was a perfect opportunity to deploy UniVerse because we were looking at a huge amount of data that not only had to be kept up-to-date in real time, but also needed to be kept in multiple locations."

About Rocket U2

Rocket Software is a global software development firm that builds and services Enterprise Infrastructure products for the world's leading OEMs, networks and software companies and enterprises. The company's current lines of business complement and extend strategic OEM offerings in the areas of

database, business intelligence, storage, networks and telecom, terminal emulation and FTP, integration, modernization and SOA, and security. Rocket is engaged in business and technology partnerships with IBM, EMC/RSA, HP/EDS, Nortel, Motorola, and many others. Rocket Software is based in Newton, Massachusetts.

For more information, visit www.rocketsoftware.com/u2/ ■



Autodata Systems Installs QM In 300 Outlets

AutoData Systems, Inc. (ADS), specialists in retail accounting and reporting systems in the petroleum sector have chosen the OpenQM database from Ladybridge Systems to upgrade software installed at 300 outlets.

The software was originally developed in the early 1990's on the Rev G platform running on Windows 95. The upgrade to QM includes a change of operating system to SUSE Linux. Data from each retail outlet will be uploaded to the corporate system on a daily basis.

About AutoData Systems

AutoData Systems, Inc. has been engaged since March 1985 in the development, production, marketing and support of computer systems for business applications. ADS's marketing efforts are currently concentrated in the distribution, petroleum, medical, automobile dealership, and credit collection industries.

Systems marketed by ADS generally consist of a combination of computer hardware, operating systems software and customized application software packages. ADS also provide ongoing services and software enhancements.

ADS believe that the MultiValue database environment offers advantages in business applications due to its ease of use and application efficiency.

About Ladybridge Systems

Ladybridge Systems, based in Northampton, England (www.openqm.com) was founded in 1992 offering training, consultancy, development, and maintenance services for MultiValue database users. The OpenQM database product was originally developed as an embedded database engine but was publicly launched in 2001 for general use. It now forms that major thrust of the company's activities and is in use worldwide in a broad spectrum of industries. ■



NorthgateArinso Extends Partnership with Nebraska Furniture Mart

NorthgateArinso (Northgate) and Nebraska Furniture Mart (NFM) have announced that they have extended their partnership agreement through 2016. "We are excited to have this level of partnership with Nebraska Furniture Mart," says Mark Pick, vice president, Reality, "and we don't take it lightly. Long-term

relationships such as this show our commitment to our customers, Reality and to the MultiValue community."

"We believe in the future of Reality and the future of this partnership," adds Jim Fried, management consultant for NFM. "Once you find something that works, then you stick with it. That is how we see the connection we have with Northgate. We are delighted to be moving forward together," he notes. "Looking ahead we see our relationship with Northgate as a critical asset and Reality as a technology that will drive us forward."

Through NFM's history, natural disasters including tornados and floods were dealt with by rebuilding and renovating, but recent years brought lurking obstacles of a less obvious variety. A commitment to technology was soon adopted as standard practice, as NFM sought to further strengthen its position in its sector. When NFM's previous DBMS was no longer deemed sufficient to provide the kind of functionality the company required, NFM initially undertook an exhaustive selection process, during which Northgate emerged as the clear leader due to its commitment to MultiValue technology and its expertise in the field. NFM chose to migrate to Reality in the form of a partnership with Northgate. A seamless migration in 2007 laid the foundation for a business union that has expanded into a 10-year commitment, thereby guaranteeing continuity and stability on both sides.

"This firm believes in being prepared for whatever is thrown at us," notes David Ragan, NFM's senior database administrator. "That is a major reason why Northgate held great appeal," he adds. "As time goes on, our

business is going to become more web-centric and we now have the platform to adapt in whatever direction we need to."

For more information, visit www.northgate-is.com/reality ■



Eastern Metal Supply Migrates Mission-Critical Distribution System to jBASE

Eastern Metal Supply is a first-class supplier of aluminum products, providing common alloy aluminum standard and custom extrusions including sheet products. Founded in 1982 with a single Florida location and just five employees, the company now has seven nation-wide service centers and has grown to employ 350.

At the heart of the company's manufacturing and distribution network is a MultiValue application developed in the 1980s by Dan Madden, General Manager and CIO of Eastern Metal Supply. In 2009 the company decided that moving the application from the D3 system it had been on for the past 15 years was necessary. Eastern Metal Supply selected jBASE, a subsidiary of Mpower1 International, to satisfy its evolving needs.

Prompting the move was the desire to integrate parts of the application with Microsoft SQL Server, explains Madden. "We saw many benefits to convert-

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NEWSMAKERS

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ing, one of which was jBASE's seamless integration with SQL Server. Some of our users wanted to be able to structure their own reports and we felt that SQL Server would give them a more robust environment to work in and allow them to use third party tools. This would give added value to our system and extend its useful life."

jBASE can read and write to whatever database is required for storage through an open, published interface, jEDI. Off the shelf connectivity is available for Oracle, IBM's DB2 and Microsoft's SQL Server and an ODBC driver is available for other databases.

The migration was not considered lightly. "The software itself

touches every single aspect of the operation—the accounting department, manufacturing, the warehouse, purchasing, sales, HR, credit, so every single department was affected by this," says Madden. "It was absolutely critical that we did not have any issues, as our business would be adversely affected."

After making the decision to migrate the mission-critical application, Madden assembled a team of people to map out the conversion. Planning began at the start of Q2 2009, with the goal of making the conversion at the end of hurricane season.

Throughout the process, jBASE provided direct access to technical support. "jBASE was great," says Madden. "We talked to them every day and anytime we brought up features that we saw that we needed, if it wasn't

available, the jBASE engineers would look at it and see if they could incorporate it. I don't remember there ever being a time where they said 'no we can't do it'. It was a team effort all the way around."

The team at Eastern Metal Supply accomplished all of its goals in a six-month period and was able to take an additional month for testing prior to going live with the new system. "We have a rather complex environment of virtual machines and networks and backup facilities that are located remotely," says Madden.

The actual conversion started on a Saturday morning in early November 2009, and was completed by Sunday night. "By Monday, we were back in business and the system was operational." Madden had been prepared for the possibility that

integrating the company's 50-plus printers of different sizes, capacities, and brands with the new system might be a hurdle, but it was not an issue at all. Following the planning and test period, it took 20 hours that weekend to accomplish the conversion.

Reflecting on the process, Madden says, "I can't emphasize enough how helpful jBASE was in the conversion process. My people were very pleased with the whole process. And, the fact that it was such a success speaks for itself!"

jBASE offers significant discount options on migrations from other MultiValue platforms and flexible payment plans tailored to the needs of the business. For more information, visit www.jbase.com. ■

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BUSINESS TECH: MARKETING — PART 3

Continued from page 11

on point, and won the argument in my favor. Everything in the opposing view was equally true. Now some people do try to label their lies as spin, but that doesn't make spinning and lying synonymous. After all, they are a bunch of liars.

Back to IT

For those who remember that this is a Business Tech article, we should discuss how Tech plays a role in all of this. Obviously, modification needs re-enforcement. So, look at the web, look at the printed literature, look at everything your system generates that ends up in the customer's hands. It all needs to tell a consistent story. If any part of that story includes IT deliverables, then you have to look at those as well. Often IT is the product, or is part of the product. This is the so-called Information Economy. So we have to make sure that our contribution to the whole meets not only the need but also the message.

We have to support all three of the M's to support Marketing's objectives. We have to adjust as their plans adjust. And that's why I wrote this on a gleaming MacBook Pro in picturesque Westin Hotel while sipping Dr. Pepper, instead of pounding it out on a computer while drinking soda in my room. **IS**



CHARLES BAROUC is the CTO for Key Ally, Inc. He is current President of the International U2 Users Group, and a regular Spectrum Magazine contributor.

Contact Charles at Results@KeyAlly.com, or phone (718) 762-3884 ext 1.

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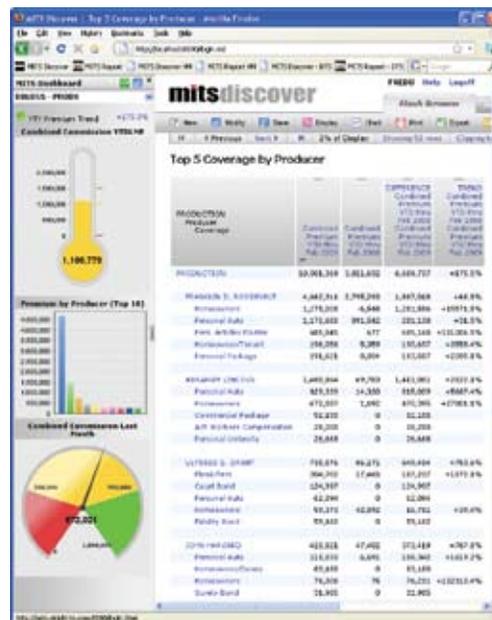
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New Products



Pavuk Technologies Announces Its Internet Development Framework

Pavuk Technologies, LLC is pleased to announce the upcoming availability of its flagship product, Pavuk IDF (Internet Development Framework).

Pavuk IDF is a revolutionary tool to facilitate the rapid development and deployment of database-connected Web applications. It's "one-step-to-web" technology provides an environment where non-programmers can build sophisticated database applications – all in their browser. For applications requiring sophisticated business logic, a rich application program interface is available for user-written routines.

Pavuk IDF is revolutionary and disruptive technology. It is aimed at the emerging Cloud Computing, SaaS as well as departmental computing environments.

Business analysts may now create applications using a simple interface and have dynamically generated web forms running immediately.

Pavuk IDF will make its market debut at the International Spectrum convention in Denver on April 12th.

Said Bill Crowell, President, "This is an extremely exciting time for me. To see people developing large applications in a matter of minutes realizes a dream that I've had for over 10 years – that we could reduce the amount of programming and provide useful, solid and scalable applications in a time-efficient manner."

About Pavuk Technologies

Pavuk Technologies is a privately held LLC based in Charlotte, NC. For more information, contact Bill Crowell, bcrowell@pavuk.com. ■

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OpenInsight For Web (O4W) Will Include PayPal Integration

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the browser to PayPal's on-line payment site, where the transaction can be completed.

Using the PayPal "Add To Cart" feature, your customer can one or more products to the PayPal "shopping cart". Once your customer has selected a product to "Add To Cart" (either via a link or button on your web page), your O4W stored procedure will use the O4WPayPal call to redirect the browser to PayPal's on-line payment site, where the shopping cart can be reviewed. At that point, the customer can choose to return to your site for additional items, or can proceed to "checkout" on the PayPal site so the transaction can be completed.

Using the PayPal "View Cart" feature, your customer can review which products they have placed in their PayPal "shopping

cart", modify their selections, or begin the PayPal checkout process.

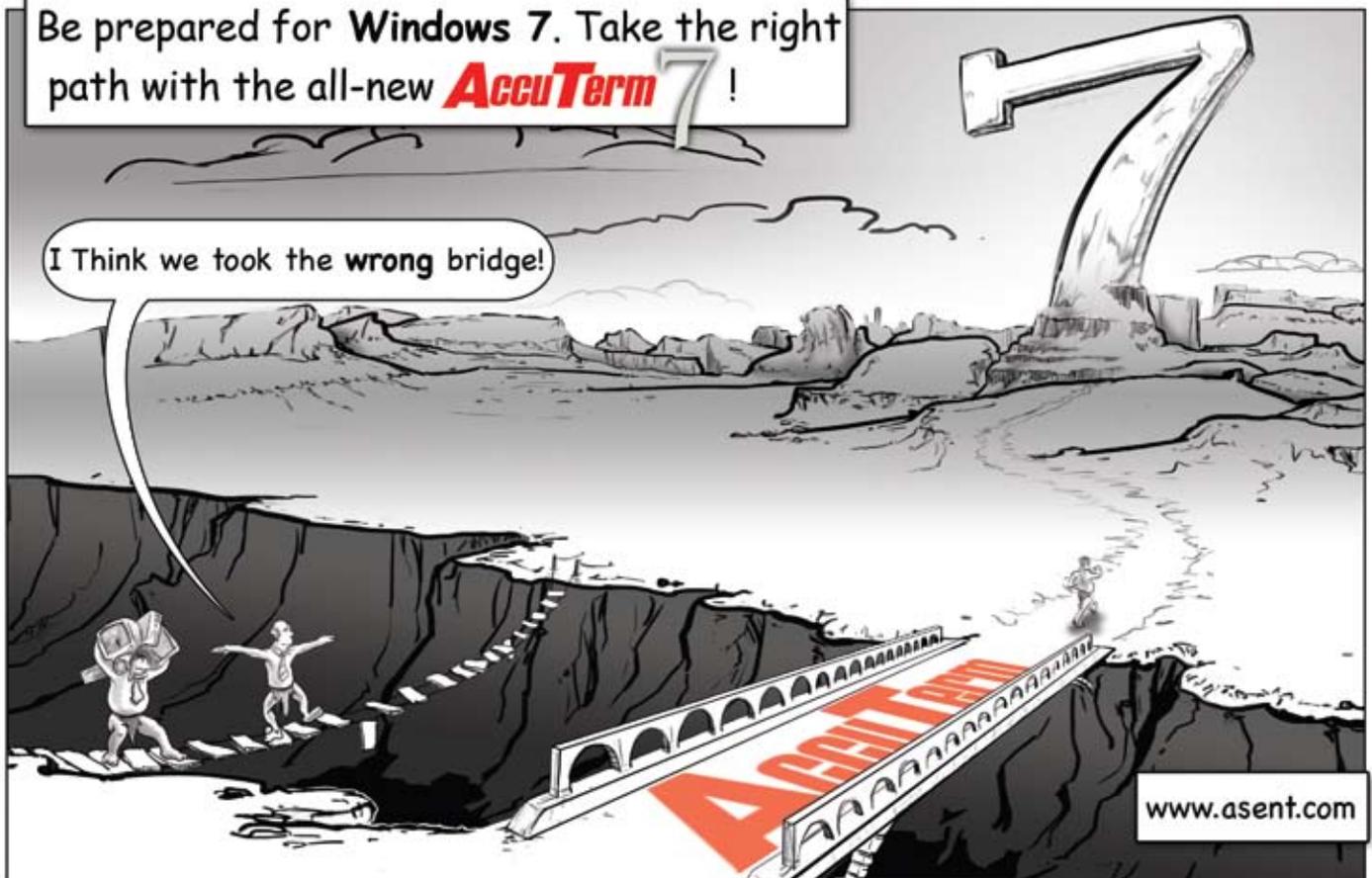
About Revelation Software

Founded in 1982, Revelation Software delivers a suite of application development tools and companion services that take full advantage of leading network computing architectures, messaging, groupware, and client server platforms. Today, the company's flagship product OpenInsight is the only database development and application environment that provides both Windows and Java-based GUIs tools to develop and deploy web-based and client server applications that support native and relational XML, SQL, Lotus Notes and the leading legacy Multi-Value data sources such as Arev, Pick and IBM Universe.

There are more than 1.5 million licensed users of Revelation products across 60,000 deployed sites worldwide. The company has offices in Westwood, New Jersey, as well as a European distributor in the United Kingdom, and an Asia Pacific subsidiary in Australia. ■

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I Think we took the wrong bridge!



www.asent.com

Connecting To QM Using SSH

What do we want to do?

We have a remote Windows server with QM installed, and we want to connect to it with AccuTerm in a safe mode using SSH.

What we need in the remote server

We need to install an SSH server, for instance COP SSH (www.itfix.no/i2/copssh), and activate at least one user to connect by SSH.

Problem

The QM connection uses Telnet on port 4242. But Telnet is not a safe protocol. Anybody can easily capture our login username and password. Of course we can open any port in the LAN router or firewall and redirect it to port 4242 in the QM server. But it will be Telnet again, even in the other port, and it will continue being dangerous for our server. Can we use a safe protocol like SSH to connect to our QM?

Solution

The solution is quite easy. We only need to create a tunnel between our local machine and the remote server inside SSH and redirect the Telnet traffic into that tunnel.

But, how do we do that?

The answer is PuTTY (www.putty.org).

What? Another emulator? But we want to use our AccuTerm.

PuTTY is much more than an emulator. We are going to learn how to use AccuTerm across PuTTY.

Someone may think, "AccuTerm can connect using SSH." It's true. But the problem is that QM cannot use SSH. So Accuterm will connect to the SSH shell on the remote machine but will not connect to QM. What can we do?

Ok, let's go. First we will download PuTTY from www.putty.org. It's just a 440KB exe file. No installation is required.

When we execute it, we will configure a SSH connection to our remote server:

Select Session and give the IP address or the DNS name of our remote server and give the remote port (usually 22 but we can change it, both in the COP SSH and in PuTTY). We also select SSH as the connection type (Fig. 1).

Now we select SSH and Tunnels (Fig. 2).

We select 4242 as the source port. Take care. If you have also QM installed on your local machine, you should change it, for instance to 42424.

Now we select as destination 127.0.0.1:4242, localhost in the remote machine and the telnet port assigned to QM, usually 4242.

We select the Local and Auto options and press the Add button (Fig. 3).

We save the session in **Session** and give it a name.

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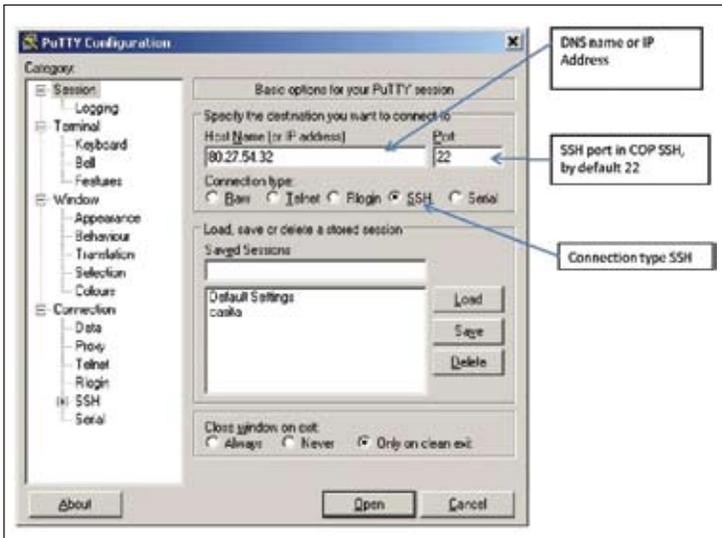


Fig. 1

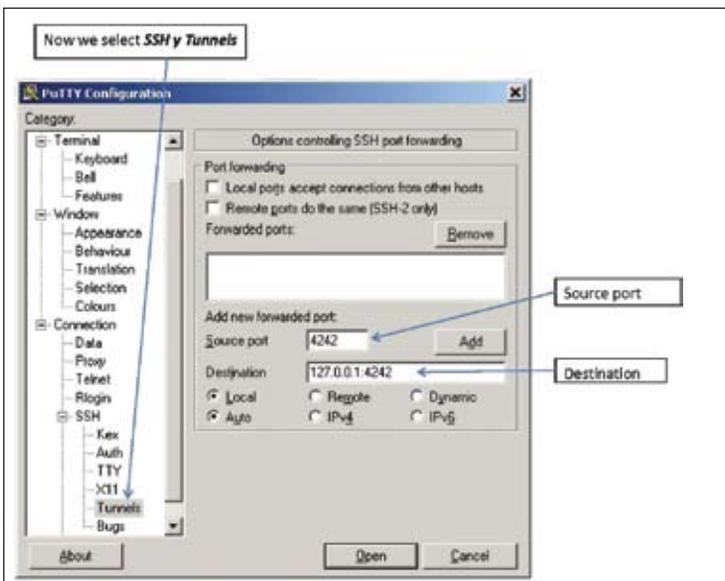


Fig. 2

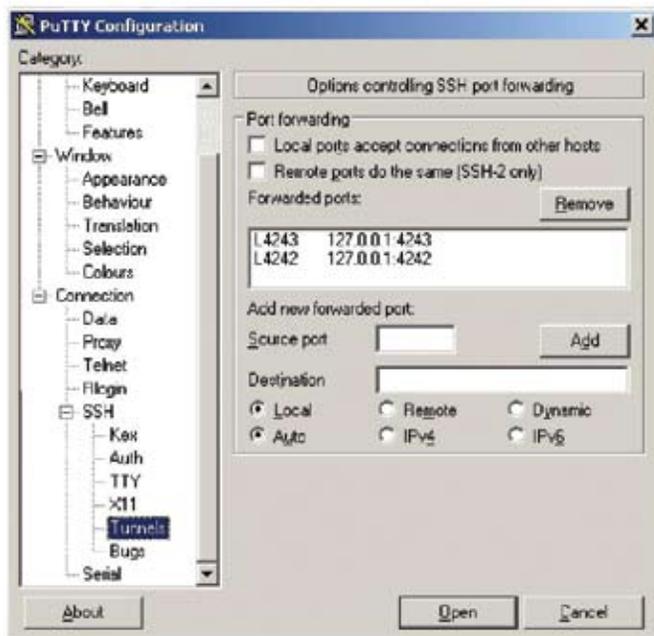


Fig. 3

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2010 International Spectrum Conference Feedback

Continued from page 8

— **Informer.** So I went and talked with him a little bit more, because we didn't really have a chance to talk at the breakfast. I'm glad he was there, because I was able to talk to him more. That's the kind of thing that I'm interested in myself and probably for GM Nameplate. So I was happy to be able to talk to him. And then some of the people in the other booths, like the Ashwood booth, that have solutions that might be solutions for me that I might not have connected with, had I've not gone into the floor. So that's valuable. And then just meeting up with old friends like MITS — we're a MITS user. Meeting up with them and kind of catching up. And talking to the jBASE people here. That was valuable.

SPECTRUM: *So being able to actually talk directly to your vendor?*

CONNIE: Yes. That's been valuable, and I think that's always valuable in these kinds of settings. And it's fun. It's a fun time to talk to people. Yes, it was good. **IS**



2010 MultiValue Award Winners

International Spectrum 2010 was the inaugural event for the MultiValue Awards program. This year we started with 2 awards: Most Valuable Professional (MVP) and the New Technologies and Solutions Awards.

The "New Technologies and Solutions" Award was created to recognize companies that have introduced innovative ways of implement or access new technologies with their MultiValue enterprise.

The nominations for the "New Technologies and Solutions Award" were:

- Entrinsik Informer
www.entrinsik.com
- Pavuk IDF
www.Pavuk.com
- SnupNow
www.snupnow.com
- FastBak DR
www.ashwoodcomputer.com

The award was presented to Entrinsik's Informer.

The "Most Valuable Professional (MVP)" award was created to recognize MultiValue Professionals that have benefited the MultiValue Community with the knowledge, expertise, and/or support.

The nominations for the "Most Valuable Professional (MVP)" were:

- Dave Peters of Rocket U2
- Rod Owens of Ashwood Computer Solutions
- Bruce Jamilkowski of Mouser Electorics

The award was presented to Rod Owens of Ashwood Computer Solutions.

Congratulations to the winners!



Chris Reeves, Entrinsik



Rod Owens, Ashwood Computer Solutions

CONNECTING TO QM USING SSH

Continued from page 22

That's all. It's done.

Now we can connect to the remote server by SSH using PuTTY (Fig. 4).

We give our username and password (remember it should be active in COP SSH) and go to the COP SSH shell. We leave puTTY there.

And now we create an Accuterm session, by telnet using LOCALHOST as the name of the server and port 4242 (or 42424 if we changed it in the PuTTY configuration) (Fig. 5).

And now we are connected to QM by SSH in a safe mode over the Internet (Fig. 6).

Evolution

Of course it is not very pretty to have the PuTTY green screen there and to force the user to run PuTTY first, start Accuterm later, etc.

By now, we have learned the theory of the PuTTY tunneling, and we understand how it works. So it's time to introduce you to Plink. What is Plink?. It's just a small PuTTY, created by the same people. You can also download it from www.putty.org. It is a simple 236K bytes executable.

Now you can create a BAT file, that can create the tunnel and start AccuTerm. You only need to create the tunnel in the next line in the BAT file using the syntax shown

After the execution of the bat file you can connect to QM configuring Accuterm to connect by Telnet to port 42423 in the localhost.

This example works by tunneling the QM Telnet connection with SSH. But the same system may be used for instance to create SSH FTP, connect to D3 Windows using Telnet with SSH, using VNC with SSH, using Terminal Server or Remote Windows Connection across SSH or whatever you want. **IS**

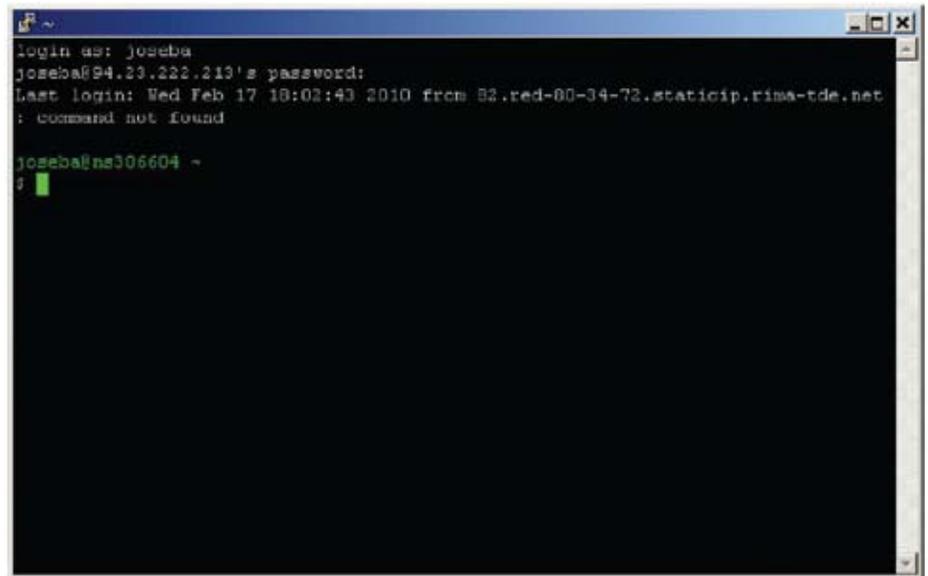


Fig. 4

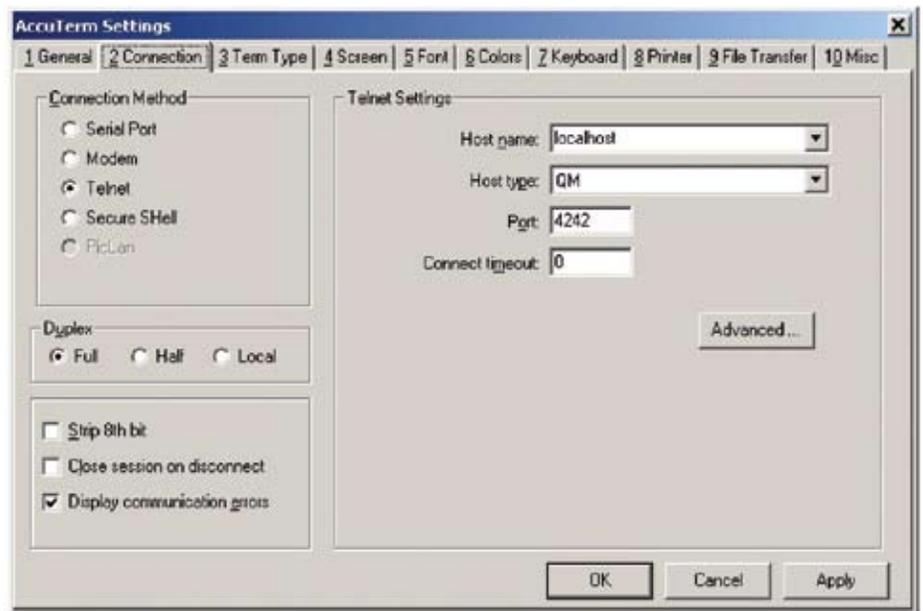


Fig. 5

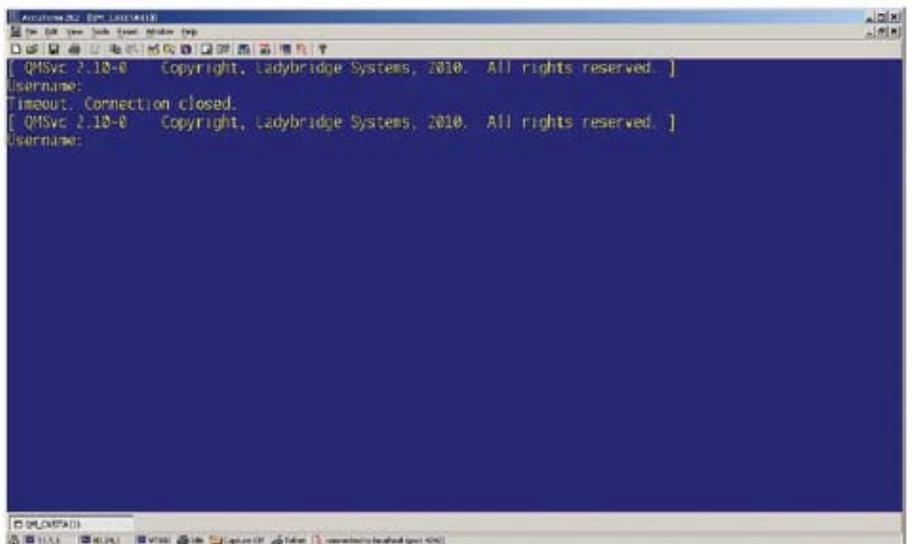


Fig. 6

MultiValue User Profiles

Personal

Leisure activity:

Bicycling, Woodworking, Boating

Biggest business related pet peeve

The typical “not my job” attitude of some people and the overall decline of the work ethic.

Personal Computer

Work: Dell Latitude D630 Laptop
Home: Dell Vostro 1510 Laptop + Dell XPS 400 Desktop running UniData and System Builder

If I were in another line of work, I'd be...

Park Ranger for one of the National parks.

Business leader I'd most like to have lunch with

Either Warren Buffet or Jimmy Buffet, I'm somewhat undecided which has influenced me more.

Career Track

How long at the current company?

Combined total of over 13 years of a 30+ year career.

Career accomplishment I'm most proud of?

Becoming the VP General Manager of the EVCO service bureau.

Most important career influencer/influence?



GLENN JENSEN

Senior Development Manager
P2 Energy Solutions

My wife. She encouraged me to look into this new computer stuff way back in the early 70's and stood by me and supported me through all the learning and long 14-16 hour days of my early career.

What decision would I like to do over?

The decision to not go back to school and get my degree.

On The Job

IT Budget

I do not have responsibility or knowledge of my department budget.

Size of IT team

20 Multivalue Staff members and 2 non-MultiValue.

How many MultiValue DBAs/Programmers?

13 MV Programmers, 4 Business Analysts, and 5 Project/Development Managers.

What business process is run by your MultiValue Application?

Oil & Gas accounting and regulatory compliance.

Top initiatives

What are your top initiatives for the year? Does not have to be MultiValue Related.

Transition and upgrade to SBXA and elimination of all old Cuebic applications.

Vision

Advice for future CIOs?

Do whatever you can to complete the implementation of one technology or application environment before jumping into new ones. Concentrate on continued movement toward current technologies.

What MultiValue applications/products do you use?

All custom built on UniData with pure Basic, Cuebic, System Builder, and various other tools.

MultiValue Database Platform?

UniData

Where do you see an increase in IT uses in the next five years?

Leverage of mobile device capability for remote data gathering.

Business Intelligence data mining and analytics. With a big

Continues on page 27

MULTIVALUE USER PROFILES

Continued from page 26

push toward enterprise KPI's and dashboard presentations.

What changes do you see in IT in the next five years?

Continued trend toward web-based applications and data integration to SQL servers for BI and analytics.

What does your IT crystal ball say is going to happen in the next five years?

Hardware technology capabilities will continue to outpace our ability to build software that can leverage it. Continued move toward interoperability between systems and platforms. Continued move toward mobile device interaction with business applications. (Yes, I want to access my systems from my phone/pad/etc.)

Continued struggle to find resources with MultiValue experience, but new tools will minimize or at least narrow that experience gap.

The next big thing in my business will be?

Move to new SBXA and extended UI capabilities along with more flexible data exchange methodologies and a more SOA and services approach to information. **IS**

MultiValue User Profiles are open to all end users of the MultiValue Marketplace. Contact Nathan Rector at nathan@intl-spectrum.com to learn more.

CLIF NOTES: AGING TOMATOES

Continued from page 30

your entire attention on one thing – the task that you're working on.

Some people actually prefer a mechanical timer that ticks. It makes them more aware of the passage of time. Personally, it drives me nuts. And I can't imagine sitting in a cubicle farm with a bunch of people using mechanical tick-timers. I prefer software.

Work on that task and only that task until the timer goes off

That's pretty self-explanatory. Of course one of the first question that comes up is, "What happens if I get interrupted?" The answer is that, depending on the circumstance, you can try to reschedule your interruption. If it's a person interrupting you, perhaps you could just ask if you could come and talk to them later. If it's a phone call, and it's not inappropriate to do so, let it go to voice-mail and then promptly return the call when your pomodoro is over. But if you have to interrupt your time, you simply stop your timer, deal with the interruption, and start your timer over at 25 minutes.

Take a short break

By short break we mean about five minutes. By break we mean actually doing something different. This is an excellent opportunity to stand up and stretch. I know that for a lot of you getting out of your chair for even a minute or two every half hour seems excessive. There will, however, come a time when your back and hips will thank you for it. Trust me on this one.

Then you start another pomodoro. After about two hours you take a longer break, maybe 15 to 20 minutes.

I have found that by working in 25 minutes sprints, I get just as much done as if I get "in the zone" and flow along for a couple of hours without a break. But at the end of the time spent working in sprints, I feel better rested and more alert. You might give it a try.

Another thing to note is that nothing is said about being able to finish a task in a single pomodoro. A particular task might take several pomodoro's to finish, depending on complexity and effort required. Oddly enough, I have found that this knowledge also helps reduce procrastination on unpleasant tasks. I think it's a case of, "I can put up with anything for 25 minutes." And then, as we all know, once you get started on something, is rarely as bad as it seemed when we were simply thinking about it.

I have only given you an overview of the technique. The full technique also includes tools for time tracking, recordkeeping, and estimating. You do not, however, need to use those techniques if you don't want to. I don't. But over the years I have found or developed other ways of dealing with those issues. If you would like to find out more about the Pomodoro Technique, you can download the PDF version of the block at no charge from www.pomodoratechnique.com. **IS**

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Tech Tips

Sending e-mails from our MultiValue applications is commonplace these days. There have been several Tech Tips in the magazine as well as in the newsletter about how to do this.

Many times, plain text or HTML is fine for e-mail communications. But there are times when attaching calendar reminders that can be loaded into Microsoft Outlook, Mozilla Thunderbird, or other calendaring applications is desirable.. While this is not hard, there are few things you need to watch out for.

For starters, let's look at the vCal format in figure 1.

```
BEGIN:VCALENDAR
PRODID:-//Microsoft Corporation//Outlook 12.0 MIMEDIR//EN
VERSION:2.0
METHOD:PUBLISH
BEGIN:VEVENT
DESCRIPTION:Testing Appointment\nSecond sentence in the description.\n
DTSTART:20091118T194500Z
DTEND:20091118T211500Z
DTSTAMP:20091116T165134Z
SEQUENCE:0
SUMMARY:Testing Appointment
UID:04000008200E00074C5B7101A82E008000000010B8FD150D41CA0100000000000000
END:VEVENT
```

Fig. 1

As you can see, the general format is simple enough, but there are a few gotchas to keep in mind. The first are the DTSTART and DTEND fields. These are Date/Time values that can be supplied in various formats. The easiest format to supply Date/Time in is UTC.

If you look for the Tech Tip in the Mar/Apr 2010 issue, you will see a program we supplied that generates a Date/Time value in UTC from a MultiValue Internal Date and Internal Time.

Since the SUMMARY and DESCRIPTION may be multi-line descriptions, you must separate each line with “\n”, instead of a CRLF or AM value. vCal uses CRLF to separate each field of data in the vCal file format, so you don't want any extra information included.

When you import a vCal into many calendaring programs, the UID and SEQUENCE fields are used by that program to update existing instances of the event. Unfortunately, Outlook is not one of those applications that plays very well with vCal.

So you don't have to learn the ins and outs of vCal, we have supplied a subroutine (intl-spectrum.com/s1032) that will take care of most vCal generated needs. To generate a vCal using the supplied subroutine, see the example supplied

in figure 2. **IS**

```
CALENDAR.ITEM<1,1> = Begin DATE
CALENDAR.ITEM<2,1> = Begin TIME
CALENDAR.ITEM <1,2> = End Date (Optional)
CALENDAR.ITEM <2,2> = End Time (optional)
CALENDAR.ITEM <3> = Time Zone. Blank is PST, or corrent time ZONE
CALENDAR.ITEM<4> = Length. In mins
CALENDAR.ITEM<5> = Title
CALENDAR.ITEM<6,-1> = Detail information
CALENDAR.ITEM<7> = Uid. can be left blank
CALENDAR.ITEM<8> = Alarm Time
CALENDAR.ITEM<9> = Sequence Number
CALL SPECTRUM.VCAL1(CALENDAR.ITEM,VCAL.ITEM)
CRT VCAL.ITEM
```

Fig. 2

Do you have a Tech Tip to share? E-mail it to editor@intl-spectrum.com



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NAME _____ TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

PHONE _____ FAX _____

E-MAIL _____ WEB SITE _____

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 03/08

CLIF NOTES: AGING TOMATOES

Continued from page 31

This tool is known as the Pomodoro Technique. It was developed in 1992 by an Italian chap named Francesco Cirillo. Pomodoro is the Italian name for tomato. Why a tomato? Because he used a kitchen timer shaped like a tomato. You've got to love a geek with a sense of humor.

Now I think you can see why using a technique like this would help increase productivity. You are, after all, working on things in a disciplined manner rather than just bouncing all over the place doing a little bit on whatever seems most urgent. But I have found — even after years of developing pretty good programming habits that let me get into flow for long periods of time — that the technique actually makes my life easier. The “why” is most likely different for different people. But here is what I have observed.

Decide what task you're going to work on

First of all, notice that it is singular. It says task, not tasks. You are going to take one thing, just one thing, and give it your best concentration for 25 minutes. That Intent frees your mind to really focus. You have given yourself permission to almost ignore everything else for that short period of time. It helps cut down on the mental chatter of what do I do after this, what else needs to be done, what are we going to talk about in the meeting two hours from now.

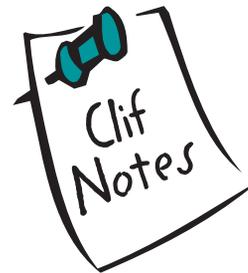
Set a timer for 25 minutes

You might feel silly when you first start doing this. But it really does work. Knowing that a timer is going to go off after an allocated period of time frees that little portion of your brain that might be concerned with losing track of the time. You're not going to slip into flow, miss an important meeting or conference call, and have consequences you're going to have to deal with an hour and a half from now. You can put

Continues on page 27

Aging Tomatoes

BY CLIFTON OLIVER



There is one thing that as geeks we seem to have in common with the rest of the human race. As we age or mature, the way that we work tends to change. If we are paying attention, it will change for the better. A lot of times these changes will be in attitudes towards our work. When we are young, working 48 hours without sleep is a badge of honor. As we get older, and assuming that we are starting to develop a life, we start to develop a sense of self-worth that is not tied to the number of hours that we can go without sleep, and we begin to resent it when abusive employers demonstrate that they actually expect it as a normal everyday work ethic. By the time you're my age, you can still do a 36 hour go-live shift because it has to be done. But having done it so many times, you don't find much gratification in it, and you certainly don't enjoy it.

At other times our focus will be upon a change of tools. A lot of us started out programming in MultiValue with the ED editor. That was the only tool we had. Then we started getting full screen character-based editors. And finally, with the advent of the PC as a workstation, many of us embraced the full GUI editors or even the IDE tools. Does using a GUI editor or an IDE make me a better programmer? No. But it sure makes it easier for me to express my code and get it into the computer. Does it make me more productive in terms of number of lines of code produced? I think so. But the fact that it doesn't make any difference which editor or development environment I'm using suggests that it's not by orders of magnitude.

So other than the hope of increasing productivity, what's behind the desire to find better tools? Simply put, to make things easier.

In previous columns I've talked about things that affect productivity like "flow." (July/August 2008) I've also discussed things that interfere with productivity (Multitasking in January/February 2008). It has taken me a while to figure out that increased productivity is not synonymous

with ease of work. Sometimes we come across a tool that, although it does not make the work go any faster, it seems to make the work easier – easier to get started, easier to work for longer periods of time, easier to maintain concentration, etc. And a while back I found a task management technique that seems to have made things a little bit easier on me.

Have a tomato.

The technique is deceptively simple. The summary version is:

- Decide what task you're going to work on.
- Set a timer for 25 minutes.
- Work on that task, and only that task, until the timer goes off.
- Take a short break.
- Rinse, repeat.

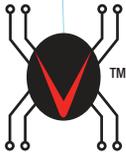
After you've done this four times, take a longer break.

Continues on page 30

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