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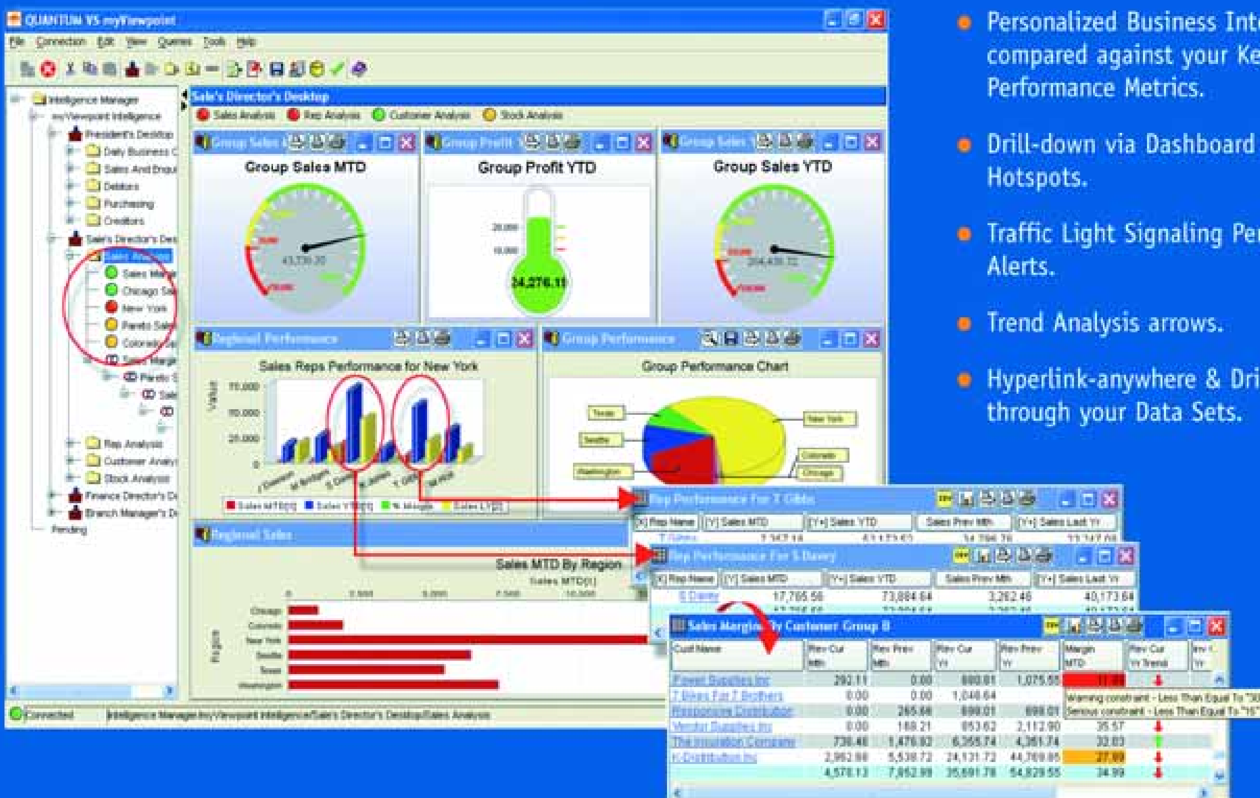

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INTERNATIONAL Spectrum
THE MULTIVALUE TECHNOLOGY MAGAZINE

FEATURES | May/June 2007

DEPARTMENTS

[FROM THE INSIDE]

Perception is an interesting thing. Depending on your perspective, the same object, concept, or theory can look different to different people. The MultiValue Marketplace is a lot like this.

Perception: We have to charge "Chump Change" in order to get any work.

This is an interesting perception. I've run across this perception in other IT market places as well, and it always confuses me. I took some time to talk with people at the International Spectrum 2007 Conference, and to other consultants I know, to see why they feel this way.

The first perception is that we "have to" undercharge because companies do not place enough value on the applications we create for them. Although if they went somewhere else to have custom programming done, they would not have a problem paying the "Perceived" value because that person or company will not charge any less.

Now add to the mix that MultiValue databases and software applications can develop complex business solutions in less time than most "mainstream" applications. So, we end up undercharging and taking half the time to develop the application on top of that. This robs us twice over.

Let's look back at the perception again: MultiValue Consultants "have to" undercharge because companies do not place enough value on the applications we create for them. This doesn't add up.

So how do you change the perception? There are many things you can do to address this, but here are a few suggestions: One, set your rates to "Industry Standard" programming rates. If you look at Oracle DBAs (and this is just a Database admin, not a programmer) and Microsoft Certified Professionals, as well as many others, you will find that they don't charge less than around $100 an hour, with a 3 hour minimum.

Two, communicate with your customers about other companies that are using MultiValue Technologies. MultiValue Technologies can be found in just about every vertical marketplace. If you are looking for information on some of the applications and companies that use MultiValue Technology, check with your Database Vendor. Most of them have a section on their web site that lists companies and applications in the different verticals.

Three, publish the successes you have had with companies that you are working with. Even if you think the projects you are doing for them are basic and not worth mentioning, many other companies are in the same boat. Don't shelter them from the rest of market.

Perceptions are all relative, not fixed. Most of the time perceptions can be changed easier than you think, just by changing one aspect of what created that perception..

– Nathan Rector, President, International Spectrum –
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MAY/JUN 2007

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Business Tech – Planning

BY CHARLES BAROUCH

Fear and planning share a common trait. They are both based on a strong awareness of consequences.

Planning takes many forms: Budgeting, MRP (Materials Requirement Planning), ERP (Enterprise Resource Planning), Model Stock, and many other business processes. All of them require an excellent sense of what's coming next. While the future is never certain, there are ways to play the odds responsibly. Let's look at how some of those techniques work in the real world.

We'll start in the manufacturing world, with MRP, since it is the most concrete. The key elements in MRP are the Bill of Materials, yield, timing, and cost. A Bill of Materials is the list of all the things which go into making one unit of whatever it is you are making. Yield is how much of a given part you will get from a given amount of raw materials—allowing for waste, cutting, bias, and dozens of other specifics. Timing and cost go hand in hand. Generally, you can save time by spending more money or save money by allowing more lead time.

So, if I need to get two dozen plastic parts to make my widget, I need enough raw plastic, delivered at the right time and price, to mold all two dozen parts. As we previously discussed in the Inventory articles in this series, raw material inventory also requires storage space within an acceptable environment. Our ability to store and maintain raw materials obviously factors into planning.

The simple case is two raw materials which are combined to make a single finished good. For example, lipstick and a case. The Bill of Materials tells us we need one stick and one case to make the saleable Finished Good. If we need to make one hundred lipsticks, we need as much of the lipstick material as will yield one hundred sticks. We need enough cases to hold the sticks. If the cases take a week longer to arrive than the content material, then we know when to order and what to make room for in the stock room. Likewise, we know when to tell the manufacturing group to expect the work, so they can schedule time to do the work.

This last idea – "time to do the work" – is called capacity, and we have to figure it into any planning we do. Getting materials in, without the ability to process them into finished goods, is pointless. If you get them in advance, its called planning. The holy grail for modern manufacturing is JIT (Just In Time) where raw materials show up immediately before you need them. This approach minimizes the space needed to store raw materials and the time needed to store finished goods. The goal of JIT is to keep receiving, manufacturing, and shipping as close together in time as possible.

This is more than a storage issue. If I buy things as I need them, the time between when I invest money into the process and the moment I get paid back shortens. Additionally, if I hold it, it can't "shrink."

Shrinkage is the general term for theft, damage, and spoilage of your inventory. In simplest terms, the longer I hold on to something, the better the chance it is unusable by the time I need it. If I am a laboratory and my supplier holds some culturing medium - which ages out - they lose the money. If I buy it and then have a production delay which causes it to age out on my shelves, then I'm out the money.

The kitchen of a catering facility or a restaurant is a factory from an MRP standpoint. The chefs need to have the raw materials, in many cases the literally "raw" materials, available to create each dish. Like most manufacturing settings, many of the raw materials can serve more than one finished good. Lettuce is a garnish on

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Planning

Continued from page 6

one dish and a main ingredient in another, and a filler in a third.

Once a raw material serves multiple finished goods, the complexity of maintaining good MRP goes up and the chances of JIT go down. However, in food service, Just In Time is not an abstract concept because food has a narrow window of freshness, and patrons will only wait so long for a meal.

If we can do JIT in the kitchen, we should be able to take the lessons learned into other industries. Unfortunately, it doesn't work that way.

One of the tricks in the kitchen-as-factory is to accept a huge percentage of waste. A chef will order an extra flat of grapes, knowing that some bunches will go bad. This does not translate well into most other industries.

Likewise, chef's will routinely sacrifice the long term value of some raw materials because of their short shelf life. By the time a fish is frozen long enough to ruin flavor and texture, it is often past the safe window of service. So a chef may well freeze fish, sacrificing some level of quality , in order to assure a deep enough supply. It won't be used past the safe point, but it may produce a lower quality dining experience. In the food business, generally, being out of it would be worse than it being a bit chewy.

The biggest reason that the kitchen isn't our model is in the costing. Go to the store and buy chicken, then look at the price of chicken in a moderate restaurant. Part of the cost is the premises and the atmosphere. Part of the cost is the staff that seat you, serve you, clean up after, and so on. But a part of the cost is a built in waste factor.

Most businesses cannot afford to raise their margins to cover the losses caused by Just In Time manufacturing. So, while the Chef is the ultimate Production Manager, he does it in ways we can't generally emulate.

This means that, in addition to looking at the cost of materials used, we have to look closely at the cost of materials lost or wasted. One of the biggest appeals of JIT is cost savings. Unless you do careful analysis, you might find yourself merely shifting costs, not reducing them.

So, to bring the focus back to MRP in general, we have to look at our systems not just from a planning standpoint, but from a "what have we learned" standpoint. All good MRP has to be based on the assumption that we will occasionally do bad MRP. We have to create reporting components which let us tune the process over and over again.

This is where raw materials, which see multiple uses, can muddy the waters. When buying silk, which is sold in rolls of rectangular fabric, you are faced with a nearly ideal usage ratio for making scarves. The process becomes one of taking a huge rectangle and breaking it into much smaller rectangles.

The same silk, used for a suit, has to be cut into all sorts of oddly shaped parts, because people are not made of simple rectangles. Suit making is about the suit looking good, not about optimal fabric yield. Since we cannot be as thick margined as a kitchen, we have to look develop a pattern of cuts which wastes as little as possible. Good analysis will show you that the waste on scarves is tiny verses the waste on suits. However, really good analysis will look at the waste verses the profits garnered.

In virtually all cases, the value returned per yard of silk is better in a suit than it is in a scarf. This is the crux of all MRP research. If you only look at one vector, you produce bad reporting. So, a proper MRP report shows how each raw material contributes to yield, waste, timing, and ultimately, cost.

Another form of reporting is linchpin analysis. In essence, this is the art of isolating the biggest constraint in the process, so that alternatives may be found. For example: if I make wrought iron railings and the part most frequently back-ordered is a decorative cap used on the top of each barb, then we can consider adjusting this product out of the Bill of Materials. Perhaps another cap would serve? Perhaps you can make the barbs blunt and simply paint on the appearance of a cap?

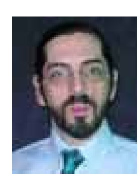
You only arrive at these questions by focusing on the right issues. You only get focus from the process of analysis. And of course, analysis flows from good information.

As you will see as we step through each part of this set of articles, planning is supported by review, which comes from matching planning to reality. Just as we match book inventory (what the computer thinks we have) to physical inventory when we count goods, we have to match plans to actuals if we want to keep good control in business planning.

ERP can be thought of in the same ways, just on a grander scale. ERP factors in the people who are backstage of the actual production, along with their needs. After all, making goods is not profitable unless someone collects the money, pays the taxes, takes the orders, and so on. The business of business is always bigger than the activity we think of when looking at a scarf maker, or suit maker, or restaurant.

The challenge with ERP really comes from looking at all the components of the business and, just like MRP, seeking efficiencies.

The next part of this series will discuss model stock and predictive behavior. If you thought predicting the future is hard, model stock is about reading the minds of your customers' customers. IS



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Event Driven Programming for MultiValue Data Servers *Using* OpenInsight

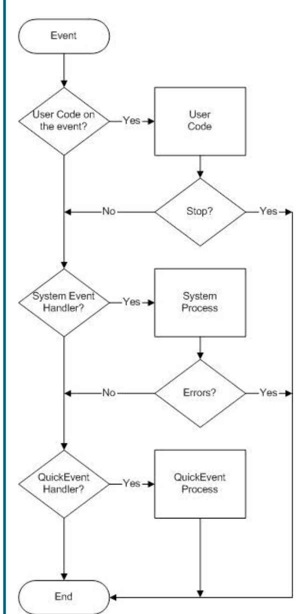
BY MIKE RUANE, REVELATION SOFTWARE

In the Green Screen world, when a user was running an input screen, it was easy to tell what prompt they started at, and the order that each prompt was accessed after that. It was like riding on a bus. You knew the route, and if the bus was at stop C, you knew it would go to stop D. In graphical world, where users are now armed with a Mouse or other pointing device, it can be more difficult to tell how a user will move from prompt to prompt, or even which prompt they are moving to. It's more like driving a car. You can pretty much go anywhere you want.

Understanding the way processes flow in response to events that occur as your application runs is crucial to your ability to rapidly and efficiently develop applications. This topic provides an in-depth look at OpenInsight's event handling systems, and some of the techniques you can use to control and manipulate them to achieve the results you want in your applications.

FIGURE 1

OpenInsight Event Chain Processing



Types of Event Handlers

OpenInsight features three basic types of Event Handlers:

User code: Basic+ event handler code written by the application developer using the Window Designer's Event Editor. User code always executes first in the chain of event handling processes. (The event chain will be described in more detail later). Basic+ is for the most part just a superset of the Basic that all MultiValue developers already know and love.

System event handlers: A default (i.e. system-level) event handler attached to a given event, the execution of which occurs at the system level, and the functionality of which is pre defined. For example, the System Event Handler for a READ event actually goes out and reads a row from a table. The application developer, though not having direct control over what happens in System Event Handlers, can control whether (and sometimes when) these execute.

Quick Events: An event handler defined non-procedurally by the application developer using the QuickEvent Builder tool in the Window Designer.

To get the behavior you want and expect from controls and windows, you must understand what the different types of event handlers are, in what order they normally execute after an event occurs, and how you, the developer, can control and manipulate the various levels of processing.

The Event Chain

Event handling processes follow a predefined logical chain or flow after an event occurs. Processing begins with User Code. It then moves down through any System Event Handlers and finishes with QuickEvents. The process of moving through these various levels of processing is called

EVENT CHAINING. For a better understanding of how event processing flows, see Figure 1 illustrating the default event chain process for flow of event handling.

Some events have a default SYSTEM EVENT HANDLER attached to them, while others depend solely upon you to supply event handling code. System Event Handlers, as the name implies, happen at the system level and you, the application developer, do not have direct control over the functionality. For example, the System Event Handler for a WRITE event actually goes out and writes a row to a table. Processes like Data Validation take place at this level also.

The technical details about how this logic layer actually works are beyond the scope of this article. What is important is that you understand what basic processes happen there, where System Event Handlers come into play in event handling, and how the processing flows before, during and after encountering a System Event Handler.

All events adhere to the general rule for event handling process flow, however you can still control whether or not that event handler executes. You do this by specifying a numeric value of 0 (zero) or 1 after a RETURN statement in your event handler code. Some events have System Event Handlers attached to them while others do not. System Event Handler processes are not the same for every event. Different things happen in the System Event Handler for the READ event than happen for a CLOSE event.

Understanding Event Chaining

To achieve the desired behavior from your windows and controls, you need to understand the standard chain of

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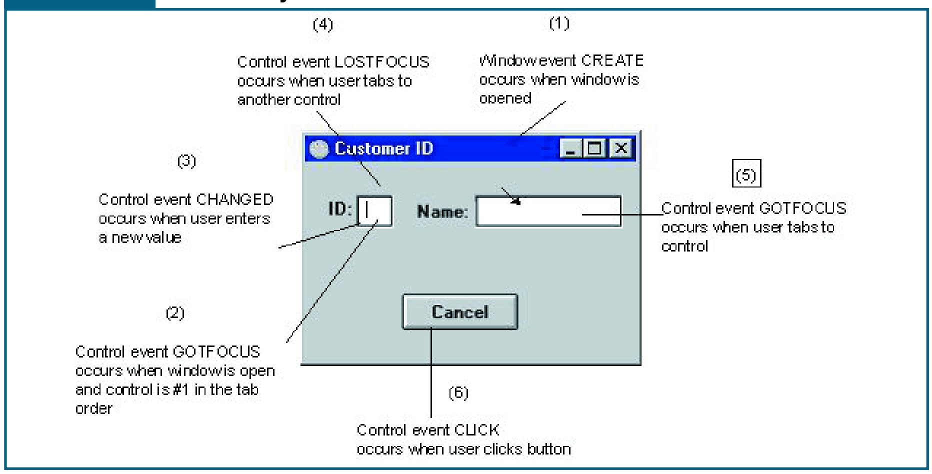
FIGURE 2 Outlines Physical Events on a Form



Recognized Event	Trigger — User Action (MS Windows Forwards) or Programmatically Sent
ACTIVATED	Occurs when a window becomes active.
BUTTONDOWN	Occurs when the mouse button is pressed.
BUTTONUP	Occurs when the mouse button is released.

Recognized Event	Trigger — User Action (MS Windows Forwards) or Programmatically Sent
CHANGED	Occurs when a user has taken an action that might have altered the text or list selection.
CHAR	Occurs upon entry of the first character in the edit table text area.
CLICK	Occurs when a user presses and releases a mouse button while the cursor is on a control.
CLOSE	Occurs when a window is about to close.

Recognized Event	Trigger — User Action (MS Windows Forwards) or Programmatically Sent
COLSIZE	Occurs when a column dimension changes.
CREATE	Occurs when a window opens.
DBLCLICK	Occurs when a user presses and releases a mouse button twice in succession, while the cursor is on a control.
DDEADVISE	Occurs when a DDE server is requested to supply an update for a data item whenever that data item changes.
DDEERROR	Occurs when a DDE communication fails.
DELETEROW	Occurs when a row is deleted from edit table.

Recognized Event	Trigger —User Action (MS Windows Forwards) or Programmatically Sent
DROPDOWN	Occurs when the list portion of a combo box drops down.
GOTFOCUS	Occurs when focus shifts to a control.
HSCROLL	Occurs when a window is scrolled horizontally.
INACTIVATED	Occurs when a window becomes inactive.
INSERTROW	Occurs when a row is inserted into an edit table.
LOSTFOCUS	Occurs when focus passes from the control to the window or another control in the window.
MOVE	Occurs when a user moves a splitter bar.
MENU	Occurs when a menu item is chosen.
POSCHANGED	Occurs when the position of the edit table cell with focus changes.
SIZE	Occurs when a window's size or position has changed.
VSCROLL	Occurs when a window is scrolled vertically.

event handling, what happens at the system level (if event handling chains down that far), and finally, when or whether the event will FORWARD through the event chain to the next level of event handling.

The event handling chain always begins with User code. The code you write controls whether or not the event will progress through the event handling chain or stop at the User code level. If no User code exists, the event forwards through the event chain as described earlier.

In graphical world, where users are now armed with a Mouse or other pointing device, it can be more difficult to tell how a user will move from prompt to prompt, or even which prompt they are moving to. It's more like driving a car. You can pretty much go anywhere you want.

Variations in Event Chaining

All events follow the standard chain of event handling. However, some events may appear to vary from the norm. This is because of what happens in the System Event Handler for these events. Because of their intrinsic functionality, some events always forward through the chain if no errors occur in the System Event Handler for the event.

Recognized Event	Trigger — Only Programmatically Sent
ARRANGEICONS	Occurs when icons are rearranged in a window.

Recognized Event	Trigger — Only Programmatically Sent
CALCULATE	Occurs after a read event in a form that has symbolic fields that need calculation.
CASCADE	Occurs when windows are arranged in a cascaded fashion.
CLEAR	Occurs upon clearing a form.
DELETE	Occurs when a row is deleted from an edit table.
HELP	Programmer defined; usually occurs when user selects a menu item or uses an accelerator key combination to get additional information.
IXLOOKUP	Looks up an index.
OLE	Processes an OLE control's native events.
OMNIEVENT	Enables the creation of user-defined events.

Recognized Event	Trigger — Only Programmatically Sent
OPTIONS	Programmer defined; the default menu provides an Options command on the Edit menu; the Options command is often used to display a Popup, but can be used for anything.
PAGE	Occurs when the current page of a multi-page form changes.
QBFABS	Occurs when a specific row in a QBF browse list is viewed.
QBFCLOSE	Occurs when the QBF mode is ended.
QBFFIRST	Occurs when the first row in a QBF browse list is viewed.
QBFINIT	Initializes a QBF transaction.
QBFLAST	Occurs when the last row in a QBF browse list is viewed.
QBFNEXT	Occurs when the next selection in a QBF browse list is viewed.
QBFPREV	Occurs when the previous selection in a QBF browse list is viewed.
QBFRUN	Occurs when a QBF query is executed.
READ	Occurs when a row from a table is read into a form.
TILE	Occurs when windows are arranged in a tiled manner.
WRITE	Occurs when data is written to a table.

Programmatic Control & Manipulation of Event Processing

Since User code is always processed first in response to a given event, you have complete flexibility to either programmatically trigger other events and their event handlers, or to run processes before and/or after the System Event Handler for the current event. You can manipulate the chain of event processing by using the Send_Event function, or the Forward_Event and Post_Event system subroutines in User code.

Send_Event(), called from a currently executing User code, triggers a DIFFERENT event. For example, a menu command's event handler could send the CLICK event to a push button, or a push button's CLICK event could send the READ event to a window. All User code and System Event Handlers for the recipient control or window event then execute according to the normal chain of event processing.

Forward_Event(), called from currently executing User code "forwards" the SAME event on through the event processing chain, and then returns control to the next line of User code in the original event handler. The most common reason to do this is to permit event pre- and post-processing. A common example is the READ event. In User code, which executes first, you can call any desired pre-read routines. Calling Forward Event forwards the SAME event on through the System Event Handlers (i.e., the actual read). After the read, control returns to your User code, and you can then call any post-read routines before ending your event handler with a RETURN 0 statement.

Don't confuse the Post_Event() function with the concept of event post-processing as described above for Forward Event. Rather, think of Post_Event() as "posting" an event handler call on a bulletin board for later use. Calling Post_Event() in currently executing User code allows you to complete all processes in the currently executing

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FIGURE 3

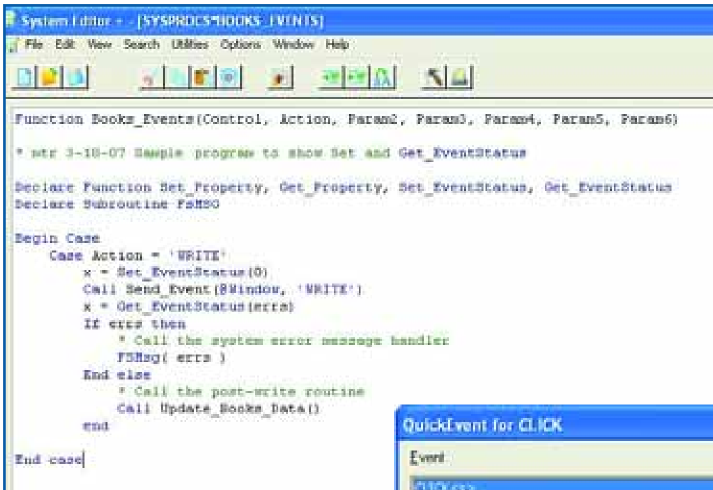
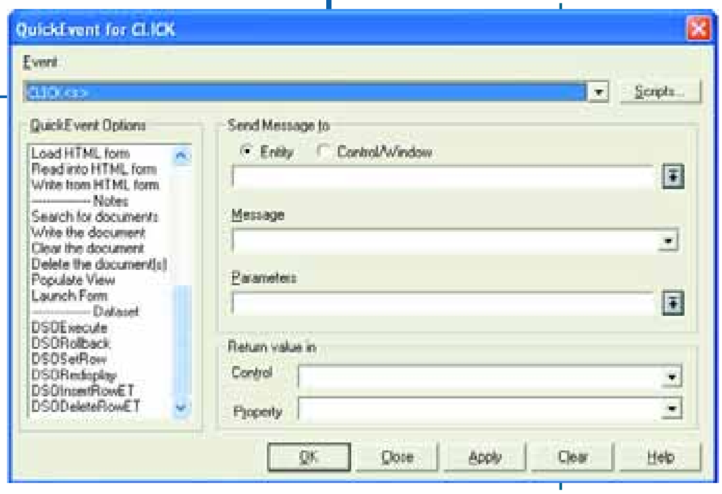


FIGURE 4



event handler; the current event handler to terminate; immediately triggers another event and its associated User code and system level processes. This contrasts with Forward Event in which all processes take place before the currently executing User code terminates.

Checking the Status of Events

There are certain events that you, as a developer, will want to check the status of. For example, if you want to send the WRITE event to the window, and then do some processing, you will want to check the status of that event. Imagine that the form has some required fields on it, and the user hasn't filled them in. Sending the write event will initiate the write process, but the lack of data in the required field will stop it. If your code presumes that the write worked correctly and the code begins other processes, who knows how bad that might get.

Luckily, OpenInsight provides two system routines that let the developer check on the status of events: Set_EventStatus() and Get_EventStatus(). As can be implied by their names, these functions allow the developer to set the status of an event or to retrieve it. In usual practice, the event status is initialized before a call is made to a function or subroutine that will affect the event chain, and then to check for errors after the fact.

The author cannot stress how many times Revelation Software's technical support has been called to assist in tracking down errors that would have been more easily remedied by using these two functions. It is highly recommended that developers use them. Figure 3 shows the use of these two functions.

Quick Event Processes

QuickEvents can be can be defined for the following commonly used responses to window, control, or menu events:

- Execute a window, popup or stored procedure
- Display a QuickHelp or message
- Perform an index lookup
- Close a window
- Read a record
- Write a record
- Delete a record
- Clear a form

More generally, QuickEvents can respond to events and cause OpenInsight to handle screen or control-level events as described above, perform Internet actions such as displaying or reading HTML data, perform Lotus Notes operations, or DataSet operations.

QuickEvents can only perform a single task in response to an event. If more than one response is desired, a procedural event handler needs to be used. Figure 4 shows an example of the QuickEvent screen.

Conclusion

Shift Happens.

That was what they said in the early nineties when the paradigm shift from procedural to event drive began to occur. It still happens. OpenInsight allows the MultiValue developer to enter into the world of Event-Driven programming in the easiest possible way. It is not pain free- we wouldn't lie to you. It's work, but OpenInsight, with its Basic+ and large repository of built in functions, makes it as easy as it can be. **is**

MIKE RUANE is President and CEO of Revelation Software. He can be reached via email at mike@revelation.com.

4GL Briefing—Omnis & mvDesigner

BY CHARLES BAROUCH

Thad Bogert of Raining Data is an expert on the Omnis Studio product. Bob Whiting is an expert on mvDesigner. They shared some of their knowledge of these tools and here's what we learned.

SPECTRUM: Omnis wasn't originally MultiValue related product. Can you tell us about its origins?

Thad: Omnis, which was originally owned by Blyth Software, was developed in 1982 for the Apple II by David Seaman, the CTO of Blyth. Blyth was originally an Apple dealership in the UK. Over the past 25 years, Omnis has been enhanced and adapted to use computer platforms as they became available, such as the IBM PC and the Apple Macintosh in the 1980s, the first versions of Windows in the late 80s, and latterly Windows XP, Vista, and Mac OS X, as well as the Red Hat and SuSE versions of Linux.

SPECTRUM: So, was Omnis graphical and object-oriented back in 1982?

Thad: Omnis was the first cross platform DBMS for both the Apple II and the PC. And no, the first version of Omnis was not graphical or object-oriented.The GUI was first available when the Macintosh was introduced in 1984. And while Omnis was introduced to Windows in 1987, the OO aspects were not added to the product until ten or so years later, when Omnis became Omnis Studio in 1997. At this time, a powerful and highly functional notation-based language was added to the existing 4GL language, allowing developers to control interface and database elements, as well as inheritance, down to a fine object level.

SPECTRUM: So Omnis has had a huge lineage relative to most 4GLs. How has that made it a better product for today's market?

Thad: I think lineage is a key word, while continual enhancement and improvement is important to developers in their business. Omnis has been able to mature over the years into a tool that enables developers to create high quality business database applications in a timely fashion. Over time, Omnis allows developers to adapt their applications, adding support for new platforms and emerging technologies as they come onto the market, therefore they are able to stay ahead of their competitors and take their business forward.

SPECTRUM: Can you give us some examples of applications that have been successfully developed in the modern version of Omnis?

Thad: Yes, and in fact we have just added several new case studies to the Omnis web site in recent weeks to illustrate the flexibility and versatility of Omnis.

For example, one travel company has built up an impressive suite of applications for the travel market, initially using Omnis 7 and now the latest version of Omnis Studio. Their software supports all aspects of the travel business including CRM for operators and

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4GL Briefing—
Omnis & mvDesigner

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agents, online booking for holiday packages, hotel and flight reservations, back-office support, and so on.

A leading alliance of consumer electronics and electrical retailers, representing over 6,000 dealers and retailers in 12 European countries, asked their own IT staff to build a solution to help its members get timely product and price information. They used Omnis Studio to create a very powerful and easy to use web application using the Omnis web client plug-in to provide the end-user GUI.

Kälte + Shop Service are located in South-west Germany and another company handles the servicing of refrigeration, climate control, and shop display equipment for many retailers including all maintenance and repair work in over one thousand gas stations. The founder and managing director of this service shop is not a programmer, but chose Omnis because the 4GL was easy to use and the ongoing maintenance of the application looked so manageable. The final Omnis solution was deployed on desktops and the web, and manages all operations in the business including all servicing, purchase orders and warranties.

Infomega Race Results are based in Athens, Greece, and one more example to mention would be Omnis' use in a specialty motor sport solutions company that has been using Omnis for many years, right from the days of Omnis 3 on the Macintosh. Their most recent incarnation of their application collects data during off-road events and provides live results via mobile text messages (SMS) and directly to a dedicated web site.

SPECTRUM: So Omnis is good for workflow applications?

Thad: Yes it is. Omnis Studio enables you to create reusable "objects" that contain all the business rules of a workflow application. Omnis has been used by many media and advertising companies, due to its strong heritage on the Macintosh platform and its ease of use for business owners. Many applications for project management and ERP have been developed in Omnis and continue to be market leaders within their chosen vertical markets. In addition, our mvDesigner IDE enables developers to make use of business logic that is already a part of their D3 or mvBase application.

SPECTRUM: So, with Omnis, I can build my logic right at the database level, or pull it out to the middle layer?

Thad: Absolutely.

SPECTRUM: How does mvDesigner fit into Omnis?

Thad: mvDesigner is an extension of Omnis Studio and was created to take advantage of the best aspects of our MultiValue and Omnis development products. mvDesigner was created to interface with D3 and mvBase to extend the functionality and usability of these products.

SPECTRUM: What are the three strongest features in Omnis Studio and mvDesigner?

Bob: Omnis Studio provides a very powerful and cost effective Rapid Application Development tool. Second, it's cross-platform and cross-database-in this case, the databases referred to are SQL relational. With mvDesigner, it works with D3 and mvBase. Third, Omnis Studio is open and extendable. We ship development files that enable developers to create their own Omnis Studio components using C++ and include them within their applications.

SPECTRUM: I know you can't talk specifically about most clients, but can you give us a feel for what sort of projects Omnis is this being used for in the real world today?

Thad: Omnis is being used right across the spectrum of business applications, such as CRM, ERP, order entry, payroll, and accounting, and in many different business sectors including the creative industry, construction, manufacturing, trade/retail, as well as the public sector and not-for-profit. Omnis is particularly favoured by small and medium-sized businesses because of its ease of use in developing and updating applications, and its relative low cost of development and ongoing maintenance costs.

SPECTRUM: If you could pick a single vertical (line of business) or Horizontal (function: Warehousing, Accounting, etc.) for which this is best suited, what would it be?

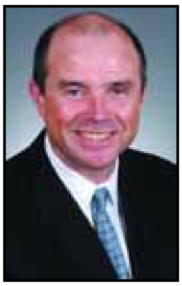
Thad: Omnis and mvDesigner are very versatile. It would be hard to pick a single market for its use because it's used in so many. Omnis is well represented in the media and advertising industries with applications for planning, scheduling and general business functions, but it equally performs for the consumer market. For example, one North American developer used Omnis Studio to create a highly acclaimed recipe management application, which is being sold today in Apple stores. For mvDesigner, a developer in South America used it to build a graphical front end to a D3 based order management application used by a large cable company.

SPECTRUM: Is there a place where people can download demo applications, trial versions of Omnis & mvDesigner, etc?

Thad: An evaluation version of Omnis Studio is available on the following web page: http://www.omnis.net/ download/studioeval.html. Also on the Omnis web site, you can read many different case studies, like the ones I mentioned here, and you can view a number of sample web applications, built using the Omnis web client technology. An evaluation version of mvDesigner is available by emailing sales@rainingdata.com or calling sales 949-442-4400. is

Interview with *Robert Nagle,* InterSystems Corporation

BY CLIFTON OLIVER



ROBERT NAGLE
Vice President of Software Development, InterSystems Corporation

Spectrum attended InterSystems Corporation's yearly developers conference, DEVCON 2007. While we were there, we had the opportunity to talk with Robert Nagle, Vice President, Software Development about the conference, the MultiValue capabilities InterSystems has added to Caché, and what this offered MultiValue developers and users.

SPECTRUM: Congratulations on a very well done conference. One of the things most of the MultiValue attendees I talked to mentioned was how much contact they had with your developers, what most of us think of as Engineering. This felt familiar as the early MultiValue vendors provided the same access. But as the companies grew, the engineers were isolated from customer contact. As InterSystems continues to grow, do you envision having to restrict contact with the developers in order to keep focus on product development?

ROBERT: First of all, let me say how glad I am that you and several other representatives of the MultiValue community are here to see, and enjoy, and experience the community we're building here at InterSystems.

On the question of Engineering interaction, to us that's one of the key benefits of attending DEVCON. Both Joe DeSantis and I—as you know both Joe and I head up development for InterSystems—both of us bring almost our entire staff down here. The only exceptions would be if people had some family emergency or something like that. So part of the benefit of attending DEVCON is the opportunity to interact with people who are creating new features or new capabilities, talk with them about how they might be best used, see some of the things we are doing for the future, and have an opportunity to influence them. DEVCON is not the only avenue for doing that. In fact both Joe and I strongly believe that it is very important to have a high degree of interaction between developers and the consumers of our technology.

Usually when we develop some new capability, we have one or two customers that we work very closely with in tailoring that for real world use. So even before we get to the point of doing a general field test, there's usually somebody who's engaged directly with the development organization at InterSystems to influence what we're doing. As I said in my keynote address on Monday when I talked about our development philosophy and our development style, there's a responsibility and an accountability and a sense of ownership within the developers at InterSystems on everything that we produce. That means that the interactions with users of that feature don't start and stop when there are discussions about how that might be used. Usually there's involvement through the first deployment, there's involvement in successive waves of development, there's even on-site involvement quite frequently to really understand how these things are being used and really insure that everything that people need is appropriately addressed. We want to hear what problems people are trying to solve; we want to see the way in which they're trying to solve them, and then we're going to decide how best to engineer the product. And the best way to do that is to not have a channel where an end user says that to somebody, who says it to somebody, who says it to somebody else, and it finally gets transmitted down to an engineer to build some little widget that's going to be part of the solution. We want to have our experienced developers talking directly with the consumers of this, whether it's on the development side or on the deployment side, because our developers have a lot of experience, and they can really understand the problems very well. And then back in Cambridge, they work with Joe, myself, and the product management group to say what we're actually building based on that input and feedback.

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New Products

BlueFinity Launches mv.NET Version 3.5

BLUEFINITY INTERNATIONAL, a member of the Mpower1 Group of companies, is pleased to announce the general availability of the latest version of its extensive toolset designed for creating Microsoft .NET-based applications requiring access to MultiValue databases: mv.NET Version 3.5.

The main thrust of the new version 3.5 release of mv.NET is an extensive re-work of the core session management components in order to build upon the already sound basis of mv.NET in the areas of system reliability, performance, resource utilization, scalability and overall robustness.

"We think that users will appreciate the effort which has gone into the enhancements to the session management component, as this is a unique and important aspect of the product", explains David Cooper, Lead Developer at BlueFinity International. "We are starting to see some very large installations going live, and the extra features within the session manager will allow them greater flexibility in managing large user communities."

As well as setting the foundation for advanced session management as the product moves forward, mv.NET Version 3.5 marks the start of a significant investment by Bluefinity into web application development tools for MultiValue developers wishing to use Visual Studio as their application development environment. It also sets the foundation for the adoption of the new Windows Communication Foundation (WCF) and Windows Presentation Foundation (WPF) technologies introduced in .NET framework 3.0.

With Version 3.5 also comes full support for Ajax within the Web Binding Objects component, a feature which has been eagerly awaited by the market. This innovation gives MultiValue developers access to a wide range of web development techniques for improving the look, feel and operation of web-based applications. "Ajax gives developers a framework for significantly enhancing the usability and interactivity of web applications," Cooper says.

Although Ajax is not a brand new technological initiative, with the release of Microsoft's ASP.NET Ajax framework 1.0, many view it as coming of age. "mv.NET provides users of Visual Studio with tremendous time and complexity savings when creating Ajax-oriented web applications that access back-end MultiValue databases."

Session Management New Features

The session management components have been significantly enhanced to provide the following new features:

Clustered session processes to provide improved scalability and greater system robustness

Enhanced session monitoring to reduce performance overhead and increase the granularity and detail of monitoring information

Session utilization statistics gathering and analysis

Replacement of third party COM components with managed code equivalents

Client identification of allocated sessions

Remote Session and Connection monitoring

A series of other refinements and additional functionality are included within the release. Visit www.bluefinity.com for a free thirty day evaluation.

About BlueFinity International

BlueFinity International (www.bluefinity.com), part of the Mpower1 group of companies, supplies leading-edge software development tools and consultancy services to the MultiValue database and Microsoft developer communities. Founded in 2002, BlueFinity has created a series of products. Its flagship product - mv.NET – is a comprehensive solution for developers wishing to access MultiValue databases from within Microsoft's .NET environment. ■

NEWS MAKERS

East Mississippi Community College Chooses Datatel Colleague

Datatel, Inc has announced that East Mississippi Community College (EMCC) has chosen Datatel Colleague, the industry leading enterprise resource planning (ERP) system, to improve workflow management and provide web-based services to students and other constituents. The College licensed Colleague Student, Colleague Financial Aid, and Colleague HR, as well as Datatel's web self-service applications. The new ERP solution will replace a Jenzabar system lacking web-based functionality.

"East Mississippi Community College is looking forward to working with Datatel to enhance our campus-wide information structure, and extend advanced Web-based services to students," said Dr. David Mullins, EMCC executive vice president. "Datatel's products and services will improve the quality of our business practices, facilitate communications between students, faculty, staff and alumni, and increase online access to a wider range of student resources."

"Datatel is very pleased to be working with EMCC in implementing a state-of-the-art enterprise solution that increases the usability and functionality of its information network for all its constituents," said Bill Knight, Datatel vice president of sales.

EMCC offers associate of arts degrees, associate of applied science degrees, and career-vocational certificates. Through the first Center for Manufacturing Technology Excellence in Mississippi, EMCC also serves local business and industry through economic development programs, workforce development training, and Adult Basic Education.

Datatel Colleague provides institutions like EMCC with the technology and functionality to remain competitive in the ever-changing higher education environment. Colleague focuses on five key business areas – enrollment and student services, financial management, financial aid, human resources, and institutional advancement.

About Datatel, Inc.

Datatel is a leading provider of fully-integrated enterprise information management solutions for higher education. Headquartered in Fairfax, VA, the company has more than 740 client institutions throughout North America. For more than 25 years, Datatel has exclusively focused on meeting the needs of colleges and universities, helping institutions operate more efficiently so they may better serve their constituents. For more information, please visit www.datatel.com. ■

EDP partners with Northgate to port Quantum VS myViewpoint to Reality

EDP is pleased to announce the General Customer Availability of its Quantum VS myViewpoint Business Intelligence, Business Performance Measurement and Decision Support solution for Northgate Information Solutions PLC Reality V12 Database Management System.

Peter Davey, EDP's Group Sales Director commented, "The software engineering and support people at both Northgate and EDP have worked well together accomplishing the successful porting of Quantum VS myViewpoint to Reality V12. We are delighted to have completed this important project with Northgate, this being a further example of the changing times in the computer services industry where more companies are working closely together to bring to market powerful 'best of breed' software products."

"The power of Northgate's Reality Database Management System is very well known, supporting sophisticated multi-user application software solutions across both industry and Government Departments. Using the power of Reality V12, Quantum VS myViewpoint enables those application users to easily and securely unlock the hidden value in their information assets, making them work much harder - automatically. Organizations are now able to capitalize on knowledge information about customers, products, services and much, much more from the raw data captured in the ordinary course of day-to-day operation, all in a Windows environment, expressing complex factual data in dashboard visualizations with the ability to drill down through multiple layers to the individual transaction level data. Quantum VS myViewpoint Anywhere, the web enabled product implementation, will also be available for Northgate's Reality V12 and is scheduled for

Continues next page

EDP partners with Northgate to port Quantum VS myViewpoint to Reality *Continued from page 23*

release in mid April."

Business Intelligence, Business Performance Measurement and Decision Support solution implementations are growing at the rate of 20% per annum. Quantum VS myViewpoint with Reality V12 unleashes the power of information intelligence enterprise wide, empowering all executives, managers and decision makers, ensuring organizational agility and responsiveness is immediately translated into customer focused service.

Quantum VS myViewpoint, together with the power of Reality V12, automatically delivers, on demand, an in-depth insight into operational effectiveness enabling performance measurement in new ways by discovering previously hidden patterns and relationships, assisting decision support.

Organizations are employing the power of Quantum VS myViewpoint and Reality V12 to identify trends, opportunities, strengths, weaknesses and threats by delivering to managers and decision makers a personalized 360-degree view of their operations, all leveraged from existing IT investments through an extremely powerful, easily implemented but very low cost intelligence layer.

About Electronic Data Processing PLC (EDP)

Electronic Data Processing PLC (EDP) is listed on the London Stock Exchange. For further information visit the Electronic Data Processing website at www.edp.co.uk. Based in Milton Keynes EDP is the largest IT solution provider to the UK independent Builders and Timber Merchants market place and a leading supplier to the wholesale distribution industry. EDP is also a leading supplier of Business Intelligence, Sales Intelligence, Business Performance Measurement & Decision support software products to customers in both the UK and USA, many of which are household names. ■

Columbia Ultimate Announces Release 2007.1 Of The Collector System

Columbia Ultimate, the industry expert in providing software and integrated solutions for collecting money, has announced the release of The Collector System 2007.1. The newest release includes a number of key enhancements to the core system as well as the CU•CONVERSE Dialer.

The Collector System is an industry standard collections tracking and management system that simplifies and automates tasks to make the collections process easier and faster. Collection agencies, debt buyers, banks, and healthcare and retail organizations use The Collector System to increase cash flow, reduce operating costs, and streamline collections and debt recovery.

"By working closely with our customers who use The Collector System on a daily basis, we have responded to their feedback and enhanced the system's functionality in several key areas," said R. Fred Houston, president and CEO, Columbia Ultimate. "This release includes a new interface with Experian Collection Advantage and expanded dialer functionality, further assisting clients in making right party contacts."

The Experian Collection Advantage is a unique add-on feature enabling users to purchase specific data elements needed to efficiently collect on accounts cost-effectively. The data can be mapped into debtor or fiscal fields allowing the system to perform automated actions on the data.

Columbia Ultimate has expanded the functionality of their CU•CONVERSE Dialer for The Collector System. The CU•CONVERSE enhancements include allowing the user to identify the Caller ID by campaign, Interactive Voice Messaging to assist in contacting the correct party, and Inbound Skills Based Call Routing to direct incoming calls to the appropriate collector.

About Columbia Ultimate

Columbia Ultimate is the industry expert in providing software and integrated solutions for collecting money. Since 1979, collection agencies, debt buyers, banks, healthcare and retail organizations have relied on Columbia Ultimate's comprehensive line of software and services to increase efficiency, profitability and success with their collections. In addition, Columbia Ultimate is the leader in providing revenue recovery solutions for state, county and local governments across the country.

Headquartered in Vancouver, Wash., with an office in Atlanta, Georgia, Columbia Ultimate is a privately-held company with more than 500 clients worldwide. For more information, visit www.columbiaultimate.com.

Revelation Software Announces Release 8.0 of OpenInsight

Revelation Software has announced the availability of the latest release of OpenInsight (OI) 8.0. OI 8.0 provides many new features including: Arev32, a console-based application window for running Arev-based applications; Banded Report Writer; Drag and Drop; TCL Assistant; Engine Server and Telnet Server; and performance enhancements to the U2 Connector. The 8.0 release also includes enhancements to OpenInsight's Application Manager, UI Workspace, Form Designer/Presentation Manager, Table Builder, System Editor+, Web Interface including OECGI2, Report Builder, OIPI, CTO and the Client Server Workspace.

Release 8.0 is the culmination of over one year's development that has touched almost every entity within the product. It is a free upgrade to current members of Revelation's Works Program.

"We have extended OpenInsight by bridging the past with the Arev32/CTO interfaces as well as embracing the future with the implementation of Drag and Drop and our Engine Server/OECGI2 technology," said Robert Catalano, Director of Sales, Revelation Software.

"I am happy to show that our commitment to our existing users and developers is more than just hyperbole," said Mike Ruane, President/CEO Revelation Software. "We have listened to our community across the globe and integrated the features that make OpenInsight an incredibly robust feature rich product."

OpenInsight 8.0 will be featured in Revelation's upcoming tradeshow schedule, including Revelation's User Conference in Las Vegas in May, 2008. OpenInsight 8.0 is available from Revelation Software, or through their network of resellers. See Revelation.com for details.

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 GUI tools to develop and deploy web-based and client server applications that support native and relational XML, SQL, Lotus Notes and the leading legacy MultiValue 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. ■

New Products

Univision64 XBENCH Result Shows 15,223.68X

VIA SYSTEMS, INC. is pleased to announce the General Customer Availability of UniVision64, the 64 bit implementation of its widely installed MultiValue Database Management System for
Linux ES/AS 4.0.x and IBM AIX 5.3.x.

Laura Hatfield, Via Systems Inc., US Operations Manager said,

"We conducted the XBENCH 3.0 benchmarking tests for UniVision64 Release 9.0.2 on a Dell 2900 system, which delivered a blistering performance level at 15,223.68X."

"The Dell 2900 configuration ran with a single 3.0GHz Xeon Dual Core processor, 4 x 73GB 15K RPM disk drives in a striped and mirrored RAID configuration, 2GB RAM, 667MHz FSB, a dual 10/100/1Gb NIC, dual hot-plug redundant PSU's, a DAT 72GB tape drive, CD and monitor, all with a low cost of just under $5,000 including three years Dell NBD Bronze Service, on Linux ES 4.0.x."

"This low cost high performance Dell 2900 configuration is capable of supporting well, up to 500-networked application users at a staggeringly low cost of $10 per user, including three years NBD hardware service!"

When told of the UniVision64 XBENCH result, Robin T. White, now in retirement, former General Manager of ADDS and the individual responsible for bringing to market the highly successful ADDS Mentor MultiValue computer system said;

"As I recall, in the early eighties the first Mentors were between 1 & 3X and did a reasonable job at the time of supporting 16 users. I also remember Ultimate coming out with its 'super fast' 5X Honeywell Level 6 based machine that supported 128 users. The UniVision64 XBENCH result at 15,223.68X is incredible performance, achieved on such a low cost Dell/Linux server platform."

Via Systems' UniVision64 is an object implementation of the MultiValue Database Management System engineered in fewer than 200,000 lines of C++.

UniVision is widely installed throughout the world supporting powerful multi-user applications in large commercial and Governmental organizations.

The detailed UniVision64 XBENCH results are available by visiting Via.com. ■

Zumasys Launches TheOnDemandOffice.com

Zumasys, a leading provider of IT solutions for small and medium sized businesses, today formally unveiled TheOnDemandOffice (TheODO.COM), a new hosted solution that provides a virtual Citrix desktop and access to popular collaboration and productivity applications. The base package includes secure browser-based access to MS Office, MS Exchange, MS SharePoint and MS Live Communication Server (secure inter-office Instant Messenger).

TheODO.COM can be custom tailored to the needs of small businesses with the ability to add virtually any third party software required. This includes customized ERP applications such as accounting software, CRM, and document management systems as well as MultiValue applications - even if they are not currently web-enabled. Customers can also add unique mobility features such as e-mail replication to Treos and Blackberrys, DID faxing, follow-me phone capabilities including the ability to deliver voice-mails via e-mail, local Outlook (RPC over HTTP), and laptop folder replication.

Customers benefit from having one central location for all of their business-critical applications and data, thus meeting the growing market demand for fast, simple, and secure application access. Unlike other solutions, Zumasys backs the complete offering with high-quality domestic technical support and on-site professional services, doing away with the need for additional IT resources.

How does TheODO.COM work?

• Your applications run in a secure data center – Essential business tools such as e-mail/files are always available

• You access your applications from anywhere – Connect from any Internet browser including embedded laptops with 3G Wireless

• You get enterprise technology on-demand – Pay as you go with no expensive servers to buy or maintain

"Zumasys' OnDemandOffice has been an ideal fit for our business. With four locations, we needed a secure, reliable hosting solution that let us focus on our business. TheOnDemandOffice has provided just that—affordable hosting that grows with us as we grow," said Chris Puentes, President of Interfresh. "When you add in Zumasys' great support staff, the decision to go with TheOnDemandOffice was really not a decision at all…it was a no-brainer."

Designed to always stay current with the latest software, TheODO.COM leverages Microsoft's new SPLA rental-based licensing model that allows companies to pay for the applications they need as they grow. This flexible Internet-based model enables businesses to start with a single base application, with practically zero start-up time, and have their IT infrastructure grow as their company grows.

TheODO.COM is an enterprise-class application platform available to everyone via the Web, allowing organizations to connect remote offices, mobile workers, contractors and accountants, etc. The net result is that companies are more productive and users are more satisfied. TheODO.COM is the industry's first solution that offers both seamless integration and automated migration to an on-premises or dedicated server solution.

Individuals and companies can sign up for TheOnDemandOffice for a monthly subscription fee of $129 per user at www.theodo.com or by calling 888-LETS-ODO. For information on Zumasys other hosting services, visit www.zumasys.com/solutions/hosting

About Zumasys, Inc.

Zumasys specializes in architecting and implementing multi-vendor technology solutions that solve IT challenges. The company focuses on preserving and evolving legacy systems and allowing remote branches and mobile users to connect to applications wirelessly. Zumasys is headquartered in Lake Forest, CA. ■

BY STEVE ALEXANDER

How to Sell Stuff: Discovery

In a previous article, I discussed the prospecting activity of selling. The current article is about discovery. I will explain the discovery process, which is simply finding out the details of what your customer wants and can afford. You may recall from the previous article that sales is the work of finding people who already want and can afford what you are selling. This time, I'll reveal some questions you can ask your customers to discover if they are likely to buy from you, because sometimes prospects want and can afford your stuff, and they are still unlikely to buy.

Let’s start by being clear that you are not going to sell to every person you contact. Furthermore, you shouldn’t want to.

Discovery involves only two basic steps:

1. Get to know them personally.
2. Establish their business requirements.

Get to Know Them Personally

Using “traditional” sales techniques, you’d probably never get to know a person until they were already your customer, sometimes for several years, and sometimes never. There is so much time spent on hype, manipulation, and downright lying, that a solid personal relationship is highly unlikely in the traditional sales model. Top sales people excel in the area of personal relationships. They want to really get to know their customers, and not just a surface sort of relationship. If you want to be a top salesperson, you will need to get way below the surface niceties.

You need to be genuinely interested in your prospect. You can’t fake it. They will know. You will have to ask questions people don’t usually ask, and they need to come from your heart and your authentic curiosity about your prospect. It could feel uncomfortable for you if you are not accustomed to doing it. You’ll have to get over yourself and do it anyway. You should remember that you are not trying to build rapport or to impress them, and you are not trying to get them to like you, although that may happen anyway.

Regarding getting people to like you, most sales people think that people buy from people they like. That is a mistaken assumption. Though people sometimes buy from those they like, it is not the main reason they buy. In fact, according to surveys, the top five factors influencing people in making major purchases are:

1. Trust in the salesman
2. Respect for the sales person
3. Reputation of the company
4. Features (facts) about the product or service
5. Price

Note that liking the salesman is not on the list. Of course, if your prospects trust and respect you, they may like you as well, so you don’t want to intentionally tick people off. But don’t put too much attention on being likeable. Instead, concentrate on being truthful, realistic, straightforward, knowledgeable, and honest. In short, be someone they can trust and respect.

I bought a new BMW from a guy I didn’t particularly like. He knew his product thoroughly, and he answered all my questions, but we had nothing else in common. He was old; I was young. He was single; I was married. He was short; I was tall. He was a smoker, I wasn’t. He was fat; I was slender. He was bald; I have hair. I think he even had brown eyes. (Mine are blue.) I didn’t like or dislike him – but I bought a car from him – because I trusted and respected him. He knew everything I wanted to know about that car, and he answered my questions honestly, or at least I thought he did.

I said,“I read in Consumer Reports that there have been some maintenance problems with this model. What do you know about that?”

He thought a moment and then said,“I know we have replaced a couple of clutches in this model in the past 6 months or so. That’s sort of unusual for a Beemer. That’s the only thing that comes to mind. I can ask the service guy if there are other things like that if you want.”

See what I mean. He didn’t dance around the question. He didn’t “handle the objection.” He acknowledged my objection; he admitted that even a BMW is not perfect; and most important of all, he built trust.

That’s why you want to get to know your prospects—to build trust. And building trust goes both ways. The object of getting to know your prospects is to find out if you want to do business with them. The range of these conversations can be wide and varied. Generally, you want to find out about their past. People tend to behave the same way in the future that they did in the past. If you find out that a person has sued the last three software vendors she has dealt with, do you really want to sell her software? You might want to be her attorney, but certainly not her software supplier.

You may find something in their personal history that is a red flag. I met a guy once who broke off all relations with his brother after a disagreement about money. That’s not the kind of person I want to get involved with—and neither do you.

In my experience, most people pass the “getting to know them” test. I find that about one out of a hundred either

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How to Sell Stuff: Discovery

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will not participate in a conversation about his past or will exhibit some sort of behavior that is a red flag for me. I suggest that you not proceed with a sale without first getting to know your prospect, and don't do business with people you don't trust and respect.

Establish the Business Requirements

Once you have decided that you want to do business with a person, you are ready to discuss details. These will include a myriad of factors, depending on your product or service. Such things as price, delivery dates, service, warranty, training, size, color, installation, and support are all important areas to specify and agree on.

Anywhere along the line, you may encounter the dreaded objections. I recommend handling all objections the same way. The three A's:

1. Acknowledge the objection. "I got it."
2. Agree that it is real (assuming it is) "You're right."
3. Ask what the prospect wants to do. "What do you want to do?"

If there is a misunderstanding about a fact, you'd want to clarify that, but if the objection is about something that is true, you need to acknowledge it, agree about it, and ask the prospect what he wants to do. Build trust — not sales resistance. When you attempt to "handle" an objection, it creates sales resistance and weakens trust — exactly the opposite of what you need to accomplish.

I suggest that you prepare a list of every negative factor you can think of about the stuff you sell. If the prospect doesn't bring it up, you can. It creates trust, and trust sells.

"The product comes in blue or red; which do you want?"

"I wanted green or black. Our company colors are green and black."

"Hmm, you're right. It would be a different color than your other products. I can't change that. What do you want to do?"

"It takes two weeks to install it. Is that OK with you?"

"We need it next Friday at the latest. Can't you put a rush on it?"

"It can't be done any quicker than two weeks. That would be the following Wednesday. What do you want to do?"

You can completely eliminate all those slick arguments you memorized for handling objections. You don't need them. You need to tell the truth and let the prospect decide what he wants to do. Sometimes, the prospect will say, "Well, we just can't accept that." Don't be afraid to walk away. It's better to find out now than to spend a lot of your time, only to find out later that there was a deal breaker you could have discovered before spending hours or even weeks of your valuable time with no sale, no commission, and no income. That's what discovery is all about. If there is not going to be a sale, stop wasting your time and move on as quickly as possible.

Questions to Ask

Depending on your product or service, you will ask slightly different questions. These are some examples. I think you'll get the idea from them. It's all about being straightforward, truthful, and honest. And it's about standing up straight and tall rather than groveling or begging.

"When we last spoke, you said you wanted accounting software. Why is that?"

"Why do you think ours is a good fit for you?"

"It's going to cost between $10,000 and $12,000. Are you prepared to spend that?"

If your prospect says something like, "I was thinking more like $5,000," you say, "I hear you. It costs between $10,000 and $12,000. I can't change that. Are you prepared to spend that, or not? It's OK to say no."

"If you decide to go ahead with this, when do you want to start?"

"What if it doesn't start then?"

"When do you want to have everything installed and working?"

"What if it can't be done by then?"

"We provide training at $500 per day. Do you want training?"

"We provide support free for 90 days. Is that acceptable to you?"

"Our warranty is one year. Is that acceptable?"

"When you are deciding about things like this, whom do you discuss it with?"

"I need to talk with them. Are you willing to arrange that?"

If the prospect says something like, "No, just give me a proposal and I'll present it to the boss," you should say, "I'm not willing to prepare a proposal without talking with the boss first. What do you want to do?"

The prospect might ask why you need to talk with the boss first. "I need to find out his concerns and objectives. I don't want to prepare a proposal and have it rejected over something that could have been handled up front."

"If you go forward, who else would have to agree?" If there is someone else, you need to speak with them as well. Continue this process until you get permission to talk with every decision maker, or not. If you can't talk to the decision maker up front, you should move on and find a better prospect.

"Is there someone else you'd rather do business with than me?"

"What could be lurking in the background that could keep this from happening?"

I think you can get the general idea from these example questions. This is a discovery process, and you want to discover anything that could stop the sale from happening before you spend your time on it. There will be different questions in your specific business. I imagine you get the general idea from these.

Next time we'll discuss the art of Negotiating. is

Steve has been a salesman for over 20 years. Having lived in several foreign countries and most of the states, he is now settled in Coronado, California, with his wife and two kids. Steve has sold computer software and hardware, professional services, insurance, stocks and bonds, cars, books—you get the idea. He is now semi-retired, though he occasionally takes on a contract involving training and coaching sales people. You can reach Steve at sanado@san.rr.com or 619-435-6789.

Caché and MultiValue: Birds of a Feather – Part 1

BY TONY GRAVAGNO

The goal of this unsolicited multi-part series will be to introduce you to Caché and InterSystems, to explain their offerings for this market, and to give you a deeper understanding of what their MV initiative means to many of us in the MultiValue community.

What is Caché?

Caché is a Database Management System and application development environment, much like many in the MultiValue market. The database is often referenced like a relational data source, making it popular among SQL users, but the internal structure is similar to MultiValue. The standard environment comes with a browser-based administration dashboard, a development "Studio," and an assortment of tools for browser UI development, web services, Java, .NET, XML, and all of the other buzzwords that one would expect.

Many of you have heard that Caché was originally based on MUMPS. This database has a history remarkably similar to that of Pick and Prime. Our communities have similar passions for the power and simplicity of our chosen models. The markets were similarly fractionalized with competing products. Even today a few versions of MUMPS exist, just as there are many flavors of MultiValue. But InterSystems has largely consolidated that market. At a time when many MultiValue people still feel a little haunted by their heritage (think foot pedals, rap singers, and software that changes ownership every few years) most Caché people I've met are proud to acknowledge their roots. It's not that their core technology has changed so much, though Caché is a significant improvement over its predecessors, but that InterSystems has fostered the validation of their technology in the eyes of the business and technical world.

> What we need is acceptance in the mainstream world without the stigma of "the P word"

Today, the Caché environment is associated with industry buzzwords like Post-Relational and Multi-Dimensional—terms also used to describe the MultiValue model. Caché is best regarded as an Object Oriented DBMS. This is not the same as Object-Relational which, while sounding more tech-savvy, is considered to be a weaker paradigm. The OO-based Caché has native support for data objects and related code within the environment itself. Compare this to API connectivity to a flat relational environment from OO languages. I will explain more about this object-orientation in another article.

However it's categorized, Caché is fairly well recognized due to ongoing marketing campaigns by InterSystems. The database is featured in many IT and business magazines, articles, and success stories. It's noted for performance, scalability, reliability, and tight security. In short, Caché is a proven and accepted mainstream platform, and now for our purposes it is also a MultiValue DBMS.

InterSystems

As a company, InterSystems is very strong and perhaps larger than all of the other MultiValue DBMS companies combined—except, of course, for IBM. In recent years this privately-held company, with offices in 22 countries, has skyrocketed to $200 Million in annual revenue, and they're still growing. This revenue comes from a healthy mix of new licenses and support fees, entirely related to the core products. Their client list includes major players on Wall Street, and all sorts of governmental agencies including the US Department of Defense, the US Veteran's Administration, and various state health agencies. In addition to the large accounts, they support a large base of smaller clients who have been dedicated to them for many years. Such loyalty must be earned and is quite admirable.

The company is not just selling software. They are aware of the industries in which their software is used and they foster the growth of their partners (application developers, solution providers, and end-users) in these markets. As an example, Healthcare is one of the vertical markets where Caché dominates, and InterSystems itself is recognized as a leader in this industry.

What is being offered?

InterSystems is encouraging MV developers and end-users to port their data and applications to Caché. Caché now includes the familiar MV query language; support for Basic, Proc, and Paragraphs; a TCL/ECL command line (yes, you can telnet into a character-based screen); and other features valued in MultiValue environments.

This offering is not called "MV Caché" or "Caché for MV". As of this year the standard Caché DBMS used by all of their users worldwide will incorporate all of the MultiValue functionality. This initiative alone is almost a dream come true, where the MultiValue DBMS is suddenly an embedded component in systems all over the world.

I believe the real offering from InterSystems is not "just another database," which seems to be a common impression. We have plenty of databases in the MultiValue market. What we need is acceptance in the mainstream world without the stigma of "the P word. We need up-line vendors who we can trust to remain in business and support our software for the foreseeable future. We need vendors who understand business needs, and who provide and eagerly support technology suitable for solving business problems. InterSystems is already helping MultiValue developers and end-users to satisfy these needs in a way that most companies in the MultiValue market do not. If you look at how they're approaching this initiative from a business perspective, it's obvious that they're offering much more than a technical solution.

Consider for example that at DevCon 2007 (their annual developer conference), InterSystems management

Continues on page 32

introduced the MultiValue enhancements as part of their keynote presentation. Also, without knowing whether or not MultiValue users were present, some InterSystems employees doing technical presentations emphasized that MV Basic could be used just like any other Caché language. And in printed marketing material which allows people to request more information about products, "MultiValue" is listed along with Oracle, SQL Server, and Sybase. We've never seen these sorts of open, inclusive gestures from any company that has acquired MultiValue technology. (The phrase "unwanted stepchild" enters into too many discussions about MultiValue DBMS vendors.) This isn't some marketing plan to make MultiValue people feel good enough to migrate. These references were directed at Caché audiences. It's apparent that InterSystems has truly embraced MultiValue at a corporate level, and that message is getting passed through their channels.

Business Benefits

Providers of business applications/solutions should consider the value of the major marketing efforts by InterSystems, which includes the immediate recognition and credibility you have when you open with a Caché-based solution. You now have an opportunity to sell software to new audiences, perhaps without asking them to change their platform of choice. Your existing sites might even be more inclined to remain with you if your software runs over the same environment used at all of these other mission-critical installations.

For new sales and existing site upgrades, the licensing model for Caché might even be more attractive than your current DBMS vendors' models, providing yet more incentive for you to support Caché in addition to other platforms. Many MultiValue resellers port their applications to alternative platforms to take advantage of better costs, while others port to align themselves with recognized names. Rarely do efforts result in getting both benefits, and many have found that the actual benefits weren't quite what they had originally hoped.

For application and tool developers supporting a product over Caché in addition to MultiValue platforms, your clients and prospects in the MultiValue market may appreciate that your software is more "future proof" than that of your competitors. This intangible sense of comfort could help your customer retention and new sales over MultiValue platforms, whether or not these companies ever migrate to Caché.

Individual developers also now have a larger prospect base for employment, and in fact your skills may be in higher demand as more Caché sites adopt MultiValue solutions. Consider how many sites already have a MultiValue solution, that box in the corner that they might like to integrate more closely into their other systems. If there was any doubt before, Caché users will soon be learning that MultiValue developers are in fact available to assist with such efforts, and if they want to re-host their MultiValue app into a Caché environment, you can help with that too.

Individual developers and consultants, consider this: MultiValue application vendors that port to Caché (we hope and expect) will get more clients and more sales. That means more work, and that means they will be hiring or contracting with more developers to satisfy demand. As the owner of a business that provides development services, this is all very important to me, and part of what motivated me to write these articles.

Here's another angle: Some Caché users might still have the sort of "isn't Pick dead?" impression that some of us have about MUMPS. Over time, they may come to understand that there is still a lively MultiValue market out here, and that there are solutions available in this market which may not be available to them (yet) on Caché. That MultiValue box they have in the corner can be enhanced to integrate with their other systems through use of modern tools like Java, .NET, and the Service Oriented Architectures that are coming in vogue. By embracing this education of Caché users, MultiValue solution providers may reap many benefits with no porting effort whatsoever.

Summary

Considering the unique benefits described here, I'd advise vendors and end-users alike to monitor the progress of this Caché and MultiValue initiative. Sure, I'm enthusiastic about something new and positive in this market, but I wouldn't encourage anyone to embark on a porting effort without a wealth of information about all facets. So that's what I'm doing, providing information. I hope you find it helpful.

In my next articles I will provide more technical detail about Caché to explain why these products are "birds of a feather." This will include information about data structures, Basic, TCL, platform emulations, and other topics which are important to anyone considering a migration. I will also give you a little more insight into why I think InterSystems is worthy of our consideration as a supplemental or alternative DBMS provider. IS

TONY GRAVAGNO is President of Nebula Research and Development, providing worldwide consultation and advanced development services for Pick/MV VARs and end-users. To discuss Caché, training, migration services, or for more information about anything discussed here, please visit:

http://Nebula-RnD.com/spectrum.

Simple Version Control

BY BRIAN LEACH

If you are performing any form of development, you should consider some form of version control. Even if your code is always perfect and you never need to regress, perform support operations, or handle backtracking of business decisions, keeping a full track of the history of your changes can be useful. For the rest of us, version control can be a lifeline that, like a working disaster recovery system, you never want to rely upon but really come to appreciate when it hurts.

There is, of course, an alternative. You can snapshot and archive development at particular points. Virtual PC is an excellent tool for this since the entire disk image can be quickly zipped up and stored. But this approach does not maintain history, generate friendly code comparisons, or adapt itself to more complex environments.

Choosing a Revision Control System

Choosing a Revision Control System depends on cost, the degree of management required, and the scope of what needs to be kept under revision control.

Commercial revision systems offer managers a vision of control and increased productivity, delivering software quality, and regulatory compliance. But if this vision is to become reality, the emphasis must be on procedures first and technology second.

Like all procedures, source control is only as good as its reach. If even one developer plays renegade, the integrity of your archive can be lost, and a company may be forced to decide between heavy-handed secure mechanisms and team buy-in to ensure compliance and consistency.

Unfortunately, revision control is not sexy and often viewed by developers as another chore (like timesheets or documentation)—usually right up to the point when they have lost something vital and have to rely on it in a crisis.

Modern source control systems respond to this in different ways. Commercial systems stress the control and security they place on a team, where open source solutions have tended towards becoming ever more lightweight and unobtrusive.

Fortunately, version control does not have to be expensive or difficult. There are a number of strong open source packages that provide extensive version control features, integration with popular development environments, and a choice of user friendly interfaces. The leading contenders in this field are CVS and SubVersion. Neither offers MultiValue-specific features, but both can provide at least simple version management that, with care, can accommodate most needs.

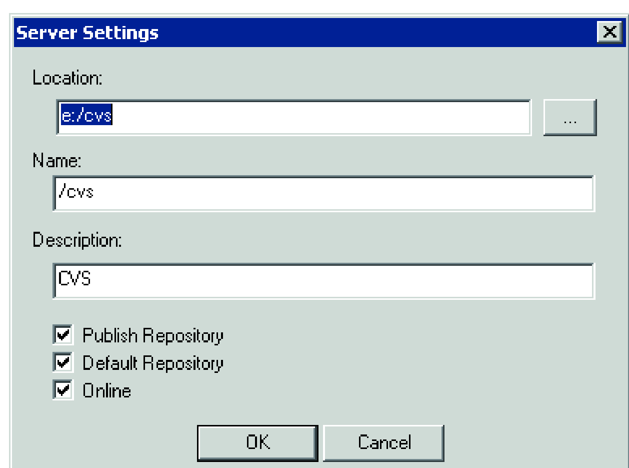

Figure 1

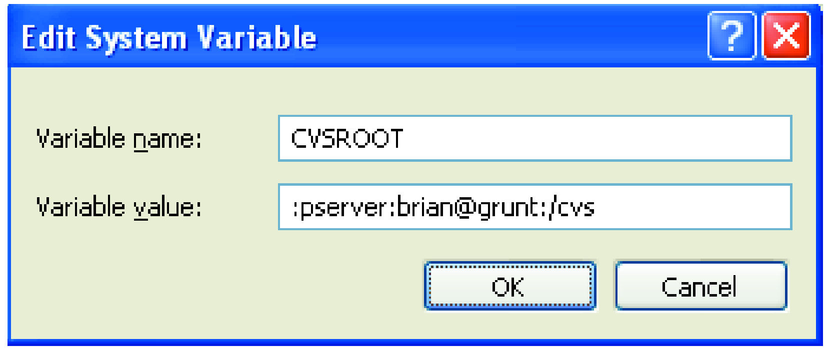

Figure 2

```
C:\Opt\GNU>cvs login
Logging in to :pserver:Brian@grunt:2401:/cvs
CVS Password:
```

Figure 3

```
C:\>cd source

C:\source>cvs import –m "Initial import" source
demo start
N source/myfile.txt

No conflicts created by this import
```

Figure 4

Why Version Control?

Revision control systems allow you to track modifications, compare different versions, identify changed files and extract working copies at different versions for support and development.

The main practical differences between different systems are the extent to which files can be organized into projects and the ease with which particular releases can be identified. CVS and SubVersion offer similar integration features but very different models of how projects should be managed.

Starting Off with CVS

The Concurrent Version System (CVS) is the bedrock of the Open Source community and can justly claim to be the most popular version control system in the world. Open Source development faces many challenges, not least of which is the ability to administer projects with many potential contributors and little control over their activities or levels of participation. Most Open Source organizations rely on CVS to coordinate submissions.

Creating a CVS Repository

The basics of CVS can be learned very quickly.

The best starting point is to download a copy of the open source CVSNT package from http://www. marchhare.com. CVSNT is an extension of CVS that includes some additional simple management tools. Despite the name, CVSNT is available for Linux, Solaris, and HPUX, as well as Windows platforms.

CVS is designed for client/server operations, and it is always a good idea to place your CVS repository somewhere other than your development or live systems. CVS needs few resources, so any old Windows or Linux box will generally suffice. You do need to think about disk space. A typical repository will grow to about three times the size of the source it is controlling over its lifetime.

Find an old Windows machine to host the repository and run the setup for the CVSNT server. CVSNT will install and start up a listener service.

CVS organizes files into a repository that mirrors a regular Windows or UNIX file system. So the first step is to tell CVSNT the location of a repository and let it initialize the space automatically.

Start the CVSNT Control Panel and supply a location for your repository under the Repository Configuration tab. For ease, call the repository cvs. You can accept the default settings for all the other configuration options (fig. 1).

Finally, set up a local Windows user on the CVSNT PC that you can use when connecting.

Setting up a CVS Client

CVS supports a variety of connection protocols offering a range of security levels. For now you should use the pserver protocol. This provides simple authentication and password caching and is suitable for most in-house operations.

On the client, the location of the CVS repository is defined by an environment variable named CVSROOT. If the repository is held on the same machine, CVSROOT holds the directory path to the repository. If the repository is on a remote system, CVSROOT holds a connection string of the form:

:protocol:[user[:password]@]server:directory

Click on My Computer->Properties->Advanced and set the environment variable CVSROOT. Specify pserver as the protocol and supply the name of the local user you created on the CVSNT server (fig. 2).

You should now be able to log into your CVS repository. Open a Windows command shell and type:

cvs login

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Version Control

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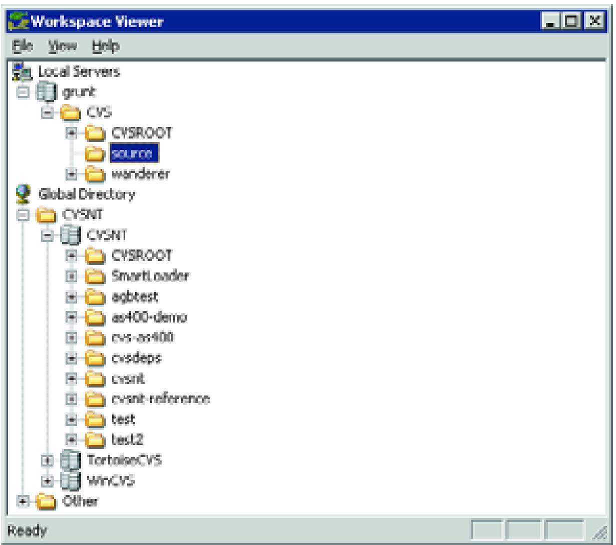

Figure 5

This will prompt you for a user name and password. (See figure 3).

Working Copies

CVS uses the model of a "working copy."

A working copy is a local copy of the source that can be modified and then merged back into the main repository. For an open source project, this will be an isolated copy held by a particular developer. For centralized development, the working copy might be the development copy shared by all your team. Files are checked out of the repository into the working copy then checked in to the repository when changes need to be committed.

Merging Changes

Older revision control systems like RCS aided team development by locking files. This works well for small controlled teams, but is impractical for community projects in which anyone may check out a file but may never return to contribute any changes. CVS solves this by using a merge facility that mirrors an optimistic locking model.

Each developer can take a working copy of the file, but when they commit their changes they will receive an error if the repository version has changed in the interim. CVS provides features for bringing the working copy up to date and for merging changes.

Importing a Directory

The first step in adopting CVS is to import your existing source directories. Create a source directory on your PC called c:\source. Open Notepad to

```
C:\>ren source source_old

C:\>cvs checkout source
cvs server: Updating source
U source/myfile.txt
```

Figure 6

```
C:\source>cvs status
cvs server: Examining .
===================================================================
File: myfile.txt            Status: Locally Modified

   Working revision:        1.1.1.1
   Repository revision:     1.1.1.1 /cvs/source/myfile.txt,v
   Expansion option:        kv
   Commit Identifier:       (none)
   Sticky Tag:              (none)
   Sticky Date:             (none)
   Sticky Options:          (none)
   Merge From:              (none)
```

Figure 7

```
C:\source>cvs diff
cvs server: Diffing .
Index: myfile.txt
===================================================================
RCS file: /cvs/source/myfile.txt,v
retrieving revision 1.1.1.1
diff -r1.1.1.1 myfile.txt
1c1,2
> Now I have made some changes to this file.
```

Figure 8

```
C:\source>cvs commit -m "First changes"
cvs commit: Examining .
Checking in myfile.txt;
/cvs/source/myfile.txt,v  <--  myfile.txt
new revision: 1.2; previous revision: 1.1
done
```

Figure 9

create a file named myfile.txt in that directory and type:

This is an original file with no modifications.

Include a <Return> before you save the file.

The cvs import command imports a directory into the CVS repository. You must tell CVS where to place the directory in the repository: this need not mirror your file system. Select the location cvs/source.

The cvs import command also includes a vendor tag and initial revision name. These are not always useful but are a required part of the syntax (fig. 4).

You can use the CVSNT Workspace Viewer on the CVS Server to check that the source tree has been added to the repository on the server (fig. 5).

Checking out Files

The cvs import command imports does not check out the files to create a working copy. Rename the existing c:\source directory and perform a cvs checkout (fig. 6).

This creates a new c:\source directory with a working copy of the file and a hidden subdirectory called CVS. This contains details of the repository location and the working copy you checked out. You can use the cvs checkout to extract specific versions of a file.

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Version Control

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```
C:\source>cvs rtag VERSION_1 source
cvs rtag: Tagging source
```

Figure 10

Committing Changes

Keeping a working copy is no fun until you start to make changes. So open your myfile.txt and add the line:

Now I have made some changes to this file.

Before committing any changes you can check which files you have modified and the differences between the current version and the working copy by using the cvs status command (fig. 7).

The cvs diff command lists any modifications (fig. 8).

Once you are happy with your changes, you can commit them using cvs commit (fig. 9).

Tagging Revisions

CVS automatically applies incremental revision numbers when you commit a file. But what about a particular revision of a whole project? CVS accommodates this by using tags. A tag gives a symbolic name to a revision and can follow practically any format, for example MYPROJECT_1.2. You can tag all the files in a project with the same tag name whether or not they have changed, even if the files are also shared with other projects. This makes managing standard libraries and scattered source code very much easier! You can use the symbolic name in place of a revision number when extracting files, performing comparisons, and most other activities.

CVS has two commands for applying tags: cvs tag and cvs rtag. The cvs tag command tags the local working copy. The cvs rtag command tags the repository files and does not need a local checked out copy (see figure 10).

Revision Log

Finally, having committed and tagged your work, you can browse back

```
C:\source>cvs rlog source
cvs rlog: Logging source

RCS file: /cvs/source/myfile.txt,v
head: 1.2
branch:
locks: strict
access list:
symbolic names:
        VERSION_1: 1.2
        start: 1.1.1.1
        source: 1.1.1
keyword substitution: kv
total revisions: 3;     selected revisions: 3
description:
----------------------------
revision 1.2
date: 2007/02/09 11:48:55;  author: Brian;  state: Exp;  lines: +1;
kopt: kv
;  commitid: 17045cc5fa6171b;  filename: myfile.txt;
First changes
----------------------------
revision 1.1
date: 2007/02/09 11:36:47;  author: Brian;  state: Exp;  kopt: kv;
branches:  1.1.1;
Initial revision
----------------------------
revision 1.1.1.1
date: 2007/02/09 11:36:47;  author: Brian;  state: Exp;  lines: +0 -0;
kopt: kv;
Initial import
```

Figure 11

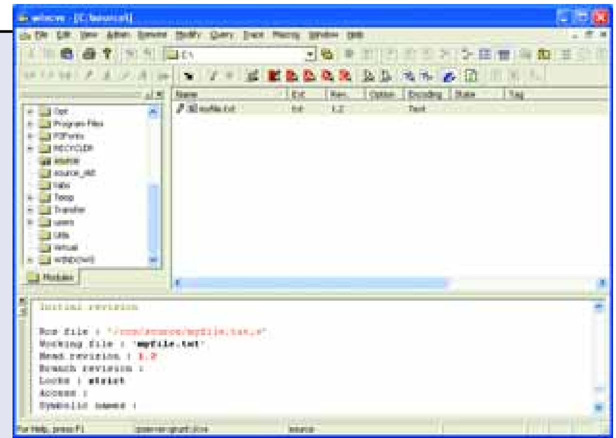

Figure 12

through your revision log for the changes and comments associated.

The cvs rlog command displays the activity for a particular module in the repository (fig. 11).

Graphical Clients

As you might expect, there are a number of open source clients that provide graphical interfaces for CVS.Two of the best are WinCVS and Tortoise.

WinCVS (figure 12) presents a comprehensive if cluttered interface for CVS commands and is tuned to the CVSNT implementation.

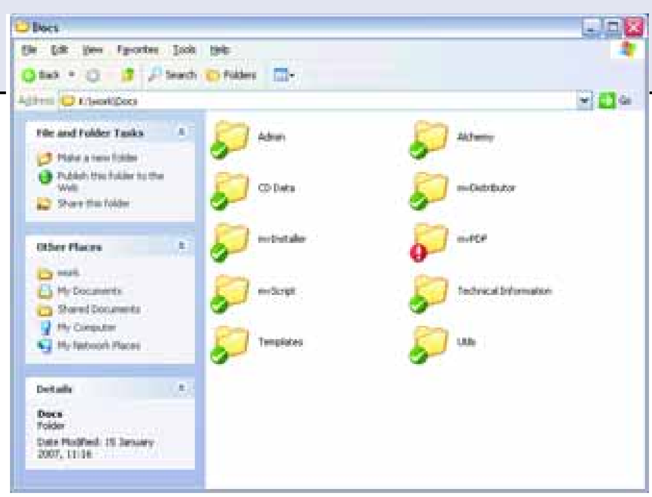

Figure 13

A very much cleaner interface is provided by Tortoise. Tortoise integrates directly with Windows Explorer, adding pop-up menus for importing, check-in and check-out, differencing, and revision history. It also adds icon overlays to provide immediate visual feedback for any directories and files whose contents have been changed (fig. 13).

Next Steps

In the next article, we will take a brief look at SubVersion and consider how these can be extended to your MultiValue projects. **IS**

The Sure Thing

BY KEVIN KING

SINCE THE DAWN OF TIME, people have been looking for that all-elusive "sure thing." Gamblers look for a sure thing as a mystical path to the ultimate jackpot. Teenagers look for a sure thing in every aspect of their lives to ensure they can maintain perception, status, and whatever else teens crave. Even business people—or perhaps especially business people—look for a sure thing in making the perfect deal to set the business up for the future. Yet while everyone searches, that old bit of sage advice tells us that the only sure thing is that, well, there is no sure thing.

But what about a good strong likely? What if something was so likely that you could accurately predict a result most of the time? And what if by accurately predicting that result you could put a TON of money in your pocket? Would you want that skill? More importantly, would you USE that skill?

As a technology consultant and educator I have found something so likely that by observing a few key indicators, one can accurately predict the end result most of the time. But we're not talking Vegas; in fact, there's a lot more money at stake than what a typical person might win (or blow) in a Vegas weekend.

Believe it or not, we're talking about Information Technology project failure. In my experience, observe any one of the following indicators and there's about a 20% chance of project failure. Observe two and it jumps to 40%. Should you actually be so unfortunate as to observe all of them at the same time, be assured: failure is a near guarantee.

INDICATOR #1: No clear definition of the problem

We've all heard the story of the boss who came in to the room of programmers all excited after having closed a great deal. "But what is the project?" asked one of the programmers. "I dunno", responded the boss, "but you guys start coding and I'll go see what the customer wants".

Though we chuckle at this kind of story, perhaps there's some truth in the every day real life of a typical IT department. All too often coding begins before there's a clear definition of the problem being solved. Then when the problem actually gets defined there will be a lot of meetings and even more stress in adjusting, or scrapping, the work completed to date.

Rework is expensive. Starting over is even more expensive. Even worse, when something truly needs to be started over but is left to languish through rework, there's a good chance that buckets of money are going to be wasted.

INDICATOR #2: No clear understanding of the solution

Okay, so maybe the problem is well defined, and maybe there's even a solution on the table, but does everyone involved understand how the solution actually solves the problem? It's one thing to know the solution to the problem of 4 – 2 = ?, but the answer is largely meaningless without understanding why that specific solution is best for that specific problem.

An IT manager was walking through the halls of a university when he was approached by a Dean. The Dean asked the IT guy if he had something to keep a record of important academic meetings. The IT guy proceeded to describe the latest whiz bang conferencing service, how it could record the meetings, cross-reference the notes from the participants, and even publish the meeting on the web for the world to review. The Dean, looking somewhat puzzled, replied "Let me rephrase: Do you have a pencil?".

INDICATOR #3: No clearly defined path between problem and solution/no milestones

Understanding the problem and solution is important, but it's equally important to know how to get from one end to the other in the straightest and most direct path possible. Yet, all too often the best laid plans get derailed by meandering. Basically, when all you know is the beginning and end, how can you be assured that every step is going in the right direction?

Basically, milestones are the answer to that all important question "what's next?" Make that next step unclear and it's like meandering though the living room at 4am; you never know when someone's moved the coffee table, and it's likely going to hurt.

INDICATOR #4: Inadequate training

"Doctor, the patient is ready". Surrounded by a team of medical professionals, you're just about to start counting backwards and drift off into a medication-induced deep sleep when you recall that you know nothing of this physician. "Doc", you quickly ask, "have you ever done this before?".

"Well," he replies, "not actually. But I read a book about it once!"

Many complex IT projects are staffed by people with exactly this level of experience. Certainly there are excellent technology books and resources, and one can learn a great deal from them. But what books typically don't do is draw a map through the unexpected, and without an experienced tour guide the project can quickly turn into a walk through a minefield. By training with someone who's walked that path before, you can save lots and lots of time, money, and stress.

Done properly training only has to happen once, whereas without training costly mistakes and meandering might happen again and again. If it takes a person three hours to do something that could be done in ten minutes with proper training, which has the greater risk—to train or not?

INDICATOR #5: Deficient teamwork and/or communication

No matter how sophisticated the technology, people remain the key to making it all work. People have the problems. People define the solutions. People draw the path between the two. But past all these people, real people actually have to use the solution, otherwise the problem remains unsolved.

Throw the most talented people together on a project and unless they can a) work together, and b) speak each other's language, much of that talent might not ever be leveraged. I'm amazed at the phone calls I get, sometimes a thousand miles away from a customer's office, asking me to relay a message to another team member who might sit within a dozen feet of the caller!

Effective teams are comprised of people who know and understand what the other team members are doing. And even more importantly, they're actually okay with the assignments because they know how each role fits into the overall project puzzle. By contrast, ineffective teams bicker about the smallest meaningless thing and are first to cast blame when anything goes wrong.

While this is clearly a 40,000 foot view of IT project failure, the fact remains that this kind of failure is significantly more expensive than success, and yet it's a whole lot easier to achieve. So to ensure success, we have to be on the watch for these indicators and take action before things start going up in smoke. Or better yet, proactively implement the exact opposite at the start of your project and watch how easy it is to get a fully completed project on time, on budget, and on target. **IS**

With 21 years of developing software solutions for a variety of vertical markets, Kevin King is internationally recognized as a leading application developer and educator for multidimensional database environments and IBM's SB+. His book, SB+ Solutions, has long been considered the authority for application development using IBM's SB+. He is also the inventor and patent holder for the Phoenix multidimensional storage technology, a private pilot, and Christian music producer... as time allows.

BY MELVIN SORIANO

Intranets today.

I remember when they were the hot new thing. You could set up something beyond just a file server. People could actually collaborate on documents, with easily searchable documents.

Today the intranet has morphed into something that is accessed as a type of portal. Rather than merely serving up local pages for internal uses, the intranets have becomes places to link, search, share and notify. Of course, a tremendous number still just have old-fashioned, pre-2000 style web sites. But the effectiveness of portal concepts has reinvigorated the intranet concept.

Google Apps, for example, ties together e-mail, documents, spreadsheets, chat, and calendars. The ability to collaborate with other colleagues at work, home, church, or school has extended the realm of intranets beyond the merely corporate. Other intranets offered up by Microsoft and IBM make it easy to identify experts in an organization. By acknowledging that some people may know more about a subject than others, they weigh rate contributions by appropriate experts more highly in searches. SharePoint Server from Microsoft, moreover, allows you to identify people in your organization whose advice you particularly value.

It's too bad they can't put a search blocker on those we don't appreciate. Now THAT would be a good Intranet search engine.

Whatever the cause, there seems little doubt that the desktop, once an office and living room staple, is fast turning into a back office gadget.

Files Overboard

Where do you back up your home PC? Some studies show that up to 51% of homes send backups to CDs and DVDs.

That's a welcome improvement. It appears that enough folks have lost all their pictures from their digital cameras ten years ago to have learned a good lesson.

Nevertheless, over a third still don't do any backups whatsoever. Amazing! Given how many people have to reformat their drives because of yet another virus attack, the loss of files because of a failure to back up must remain enormous.

And then there are those who do lots of backups. I admit, I'm one of those. I backup to CDs, DVDs, external/portable hard drives, secondary PCs, and yes online storage.

I use several online backup services. Most free online backup systems limit you to saving only one or two gigabytes of data. You can, though, spend a few bucks and have them back things up in massive quantities.

Do I trust them? Maybe, maybe not. I have to wonder why anyone would want to hack at my family photos or song lists. I do know that they should not be the sole backup of files for which you need immediate access. I've had to wait far too long for some files to be restored to think that I can depend on them for time-sensitive files.

What about home file servers? I use one. But I have to wonder, when everyone backs up their files to such servers, and dishes out videos and music from these servers, how many people are backing up _these_ drives?

Copyrights and Wrongs

Do you have valid licenses all your MultiValue software? How about PC software? Is it wrong to have software that you did not properly license or purchase?

I know I have my thoughts, but I hear such interesting conflicting beliefs. Would you purchase pirated DVDs?

Do you make the copies yourself and distribute them to others?

Are you purchasing knock-off designer goods? I actually sat next to a fashion designer on a flight back from Shanghai who was watching one of her pirated DVD movies. Astonishingly, she saw no irony in the matter.

I admit I'm no ethicist, and I certainly am no saint. But I do think that some folks who try to live by the Golden Rule most of the time seem to have an easy time forgetting such things when it comes to mushy things like copyrights.

New offices

We at Eagle Rock Information Systems have moved, after 8 years atop a very nice skyscraper (well, skyscraper for our city) in Pasadena. We moved a mind-boggling 5 blocks. It's tough to tell which is the better benefit: working on a block full of sushi bars and coffee shops, or working a block away from Caltech and all of its resources.

Give us a visit and we can decide over lunch! **is**

MELVIN M. SORIANO works at Eagle Rock Information Systems (ERIS), an Internet Application Service Provider and WebWizard/MultiValue Developer. ERIS has deployed enterprise-wide solutions on most MultiValue platforms and operating systems. HTM-Mel can be contacted at mel@eriscorp.com and visited at www.eriscorp.com. You can always call him directly at ERIS's Pasadena, Calif., offices: (626) 535-9658.

Interview with *Robert Nagle,* InterSystems Corporation

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SPECTRUM: Can end users contact InterSystems Support directly even if they have purchased through a VAR?

ROBERT: The answer is, absolutely yes. Our first priority, if there are problems, is solving the problems. Dealing with the relationships is something we take care of after that. So there might be several instances where what you describe might occur. In some cases, people may buy a license for their application through a VAR, but they may elect to have support directly with InterSystems. Perhaps the VAR doesn't offer support, perhaps the user already has support with InterSystems, or there may be other reasons for them to do that. We will certainly honor whatever it is that the end user wants to do. If there are circumstances where the VAR is unavailable to answer questions, or unable to answer questions, and the end user directs those directly to us, that's fine, too. We'll try to help. But then, of course, we have to get back and remedy the situation and try to understand if the VAR is supposed to be providing first line support. And we try to work with them to make sure that the support is there for the customer. Our priority is to keep the running system running. But then we've got to go back and figure out what led to that situation.

SPECTRUM: In a couple of sessions, I noted that it was specifically stated that the product name was Caché, not Caché MV or Caché MultiValue. Why is InterSystems emphasizing a naming issue?

ROBERT: I'm glad you caught that, because to us that's very important. Part of what we want to achieve from an engineering point of view, but more importantly from a perception point of view, is that the MultiValue capabilities in Caché are not some add-on feature, but in fact are integrated through the core of Caché as completely as possible. There's no special version that people need to buy. We take the needs of MV Basic, of MV Queries, of the features that existing applications need just as seriously as we do if somebody is migrating from Oracle or migrating from SQL Server. All those capabilities are part of the core versions of Caché. So there's no special product, no differentiation.

SPECTRUM: Other than performance or vendor issues, why would a MultiValue shop want to migrate their application to Caché?

ROBERT: The primary reason that we have been building MultiValue features into Caché is that we want to provide innovative ways for application developers to enrich their applications and move forward with them. At the basic level, the reliability, and scalability, and network capabilities of Caché are just going to be available for any application that's migrated to Caché. And that's important for applications that may be growing and reaching scalability limits or may have reliability concerns. But there are, we believe, a large sector of application providers, VARs, and even large end users who are trying to build new capabilities around core MV code, some which might have existed for a decade or 15 years or 20 years, or even longer. And they want to enrich that; they want to build new dynamic web pages, they want to web–service-enable their applications, they want to embed them in SOAP environments. They may want to tackle integration problems using core business logic that was written in Pick Basic 15 years ago that relies heavily on MV queries, and we think that Caché and our integration technology, Ensemble, will give them richer options in a single technology stack that will allow them to embrace new demands much more quickly than trying to pick and choose from third-party vendors and bolt on things to a database vendor's solution.

SPECTRUM: If someone wanted to migrate to Caché and be in production in the next three months in MultiValue, what version would they want to use, 5.2MV or 2007.2?

ROBERT: I would probably recommend that they work with 2007.2. We started field test of that this week. It's fairly stable already. In every release that we've done, we've always had some sites that have had an accelerated deployment cycle, and they've needed some features that are available in our newer release. Our support organization, headed by John Paladino, is very committed to giving our VARs and our end users a version that both meets their needs but also is going to be stable.

SPECTRUM: MultiValue files can be turned into persistent database classes under Caché. Why would someone want to do that, and do they have to?

ROBERT: No, you do not have to. That's the first statement to make. If what you want to do, for example, is build web pages or create web services, there's absolutely no need for you to build any classes whatsoever. You can do all of that just writing direct MultiValue Basic code in our Caché Server Pages, using our Zen technology that is built upon CSP, or creating web services. If you want to take advantage of the bindings that we have—the Java bindings, the .NET bindings, the C++ bindings, Perl, Python, etc.—then yes, you need to create some classes. You may not need to create classes for all of the files you have available. You may simply need in some instances to just create a single proxy dispatch class. Or it might be better for you, depending upon the nature of your application, to create classes against some of your files so you can dynamically render them to the client. That becomes an architectural choice that you have to make. And finally, if you want to have ODBC or JDBC access, you will need to create classes on the files that you wish to expose through that. Our sales engineers will work directly with MV developers to help identify what they need to do and give them the most efficient path to doing that. As I said, there are lots of circumstances where you can exploit a lot of our technology without the need to create classes. But certain things will require you to create classes on some of your files.

> The primary reason that we have been building MultiValue features into Caché is that we want to provide innovative ways for application developers to enrich their applications and move forward with them.

SPECTRUM: At the 2007 International Spectrum Conference, InterSystems was demonstrating something new—Zen. What is that?

ROBERT: I'm glad you mention that, because I think Zen was one of the highlights of this year's DEVCON. It's something that we introduced last year and has been gaining a lot of traction in our existing end-user base. Zen is a technology for creating rich web-based user interfaces. It builds on top of our Caché Server Pages, which is our technology for dynamically rendering web pages. And it has a couple of really powerful characteristics. We like to think of it as kind of Ajax on steroids in the sense that you can have a single class definition that controls both the server-side behavior and the client-side behavior. And you have a binding between the two. So you can have an object, and as you make changes to properties of the object on the server side, that triggers activity on the client side, without you needing to create any code. The Zen framework generates all of that code necessary for you. The second thing that Zen offers is a set of components using this fundamental technology. So we've built a set of components, developers have the opportunity to extend that set of components, or get components from other developers and build really rich frameworks. You can build a web application that has all the hooks and bells and whistles, and response time, that you would expect from thick clients, traditionally. But the key here now is that you don't have to install anything on the client side. The only thing that Zen requires is a browser. It does use SVG, scalable vector graphics, which is built into Firefox 2 and is available as an Adobe plug-in for Internet Explorer, but that's all you require. So if you launch Firefox or Internet Explorer, that's all that's needed on the client side to build an extremely rich user interface. I think you might have seen some of the examples in the conference this week, including some from our customers.

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Interview with *Robert Nagle,* InterSystems Corporation

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SPECTRUM: Yes, I did. Very impressive.

As new technologies are introduced to Caché, how long is it before they are accessible by MultiValue?

ROBERT: That's a good question, and it goes back to what we were talking about early on in terms of Caché MV and the naming. Right now, the MultiValue features that we've built in are core to Caché. And anything we add from this point forward will work with everything we have.

SPECTRUM: Anything you add to Caché...

ROBERT: Anything we add to Caché in general will now work with everything, including MultiValue. So anything we add in terms of code generation, or the ability to use certain kinds of methods, or performance optimizations in dispatching, or anything like that, that will all apply to MultiValue Basic code just as it would to Object Script code. Some of the optimizations and new query performance and indexing technologies that we're building into our SQL engine will transparently speed up MV queries. Because as you know, MV queries are actually implemented on top of our SQL engine. And we have a really amazingly strong team continually enhancing our SQL engine. So I think some MultiValue applications will actually speed up, without any changes happening at the MultiValue level, or any new indexing required, or anything like that, just as the engine underneath becomes faster.

SPECTRUM: What can we be expecting in the coming year?

ROBERT: Well, I hope you got a flavor for some of the things that we're working on. We continue to extend Zen. Part of the strong interest from people is to have some graphical layout tools so that you can assemble components and move them around and create that without just doing code generation. I think that for the MultiValue community another thing that's exciting is that with the release of 2007.2 all of the MV capabilities we've built in will be available in Ensemble. So any MultiValue partners who are looking at integration problems, or workflow problems, or composite application development will actually be able to do that in our Ensemble integration engine, again writing MultiValue Basic anywhere that they would write Object Script code today.

There are a lot of performance enhancements that are coming. There are some big changes in the SQL engine. There are a lot of changes to the internals of our object handling. We're completely overhauling all of the dispatch mechanisms and the metadata structures that we implement underneath that in order to provide even more scalability and more performance and very few limits on people as they build larger and larger applications using our object technology.

SPECTRUM: Thank you.

For more information about InterSystems Corporation and the Caché and Ensemble products, visit their web site at www.intersystems.com.

Clif Notes

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$40 an hour. Well, you pay peanuts, you get monkeys. If that's all a prospect is willing to pay, maybe you need to move on to the next prospect. I'd suggest everyone in this category read this issue's "Selling Stuff—Discovery" article by Steve Alexander. Which would you rather have, 100 hours at $50 an hour or 5 hours at $150 an hour? The correct answer to that question is 100 hours at $150 an hour. (Gotcha.)

Whoa, whoa, whoa! You management people! I see you sneaking towards the exits. Get on back here! It's your turn. Management frequently blames the lack of IT Governance control procedures, weekly screw-ups, and downtime on the fact that they are not on a "mainstream" database. So the chant starts that, "If we were on Oracle, we wouldn't have these problems." Horse Feathers! These same problems will still be there, in spades. The only reason the mismanagement of IT Controls isn't blinking a DESTRUCTION SEQUENCE INITIATED light in the Board's Mission Control Room is that the MultiValue staff they undervalue is so good at fixing things quickly, before they cause the business to collapse. Should the last month-closing run have failed? Of course not. Why did it? Because the MultiValue developers didn't have an appropriate risk-mitigation plan in place before the changes were put into production. Whose fault it that? If you think moving to Oracle or DB2 will solve the problems, you are in for a real surprise. Not only will the lack of management of IT Controls become even more visible, but the database environment will hinder the staff's ability to cover your, well, that thing you sit on.

I suggest that when budget time rolls around you look what you're spending on that data warehouse running on X with its staff of 20 and what you are spending on the MultiValue system with its staff of three that run's your core business and ask yourself if you are valuing the right people for the right thing.

Ok. The spankings have stopped. And I won't even send you a bill. **is**

Clif Notes: You Pay Peanuts, You Get Monkeys

BY CLIFTON OLIVER

In his "From the Inside" column this issue, Nathan Rector makes the point that MultiValue developers frequently undercharge for their professional time. This touches on some points that have been a sore spot of mine for years, so I'm going to take this opportunity to ventilate some of my frustrations with our MultiValue community. I'll try to avoid whining about "you know what really bugs me?" I'll leave that shtick to Andy Rooney. But get ready for a cyber-spanking.

First, a lot of MultiValue developers (in-house programmers, analysts, contractors, consultants) are vocal about how our database is better than the "mainstream" databases—Oracle, DB2, SQL Server, and the like. We're just as robust, scale just as well, or better, require less hardware resources, require less administrator resources, create applications faster and with more features, have good connectivity, etc. But then a lot of those same people (not all of them, thank goodness) go all apologetic when asked, "What database do you use?" They break eye contact, start to mumble, and stutter out something like, "Well, I work with NiftyBase. It's, uh, a Pick-like database. Kind of a niche market thing. It's usually sold as part of a vertical application, so you don't hear much about it. But it's, really, uh, easy to use, uh, …" Their voice trails off, and they hunch their shoulders. The body language is awful.

I am not necessarily blaming these particular folks. We've been hounded for years, decades, about how we are not mainstream, Pick is obsolete technology, the Pick job market is shrinking, no new programmers are using our technology, it's not taught in colleges. Good grief! When you get inundated with that kind of negative commentary for 10, 15, 20 years, it is no wonder so many people in our community have what I refer to as "the MultiValue inferiority complex." Fortunately, you can fight off that complex. If you couldn't, after 33 years of working with MultiValue, I wouldn't be able to motivate myself out of bed in the morning. Here are some ideas.

Act like you're proud of what you work with. Develop your own "30-second brag" so when someone asks you what database you use, you can look them directly in the eyes and say with confidence, "I work with NiftyBase. It's one of the MultiValue database and application development environments that provides a way to model real-world data more naturally than relational, makes efficient use of hardware, doesn't require a lot of administration, and permits very rapid application development. Would you like to know more?" Smile while you say it. Maintain eye contact. Stand tall.

My next beef is with the same group Nathan was talking to—contractors and consultants for hire who complain about how they get no respect, nobody wants to pay a decent rate, can't make it in this world working with an unknown or little respected database, and other myths. If you are convinced you can't charge market prices because you don't work with The Big Three databases, guess what? You're right. You can't. But the rest of us can. It isn't the database holding you back, it's your limiting attitude. If you try to sell your technical abilities with a particular database, you're always going to be at a disadvantage. Forget about selling what you know. Sell what you can do! Contrary to what most geeks like to delude themselves into thinking, Knowledge is not Power. Use of knowledge is power.

It's time to face facts, dudes and dudettes. Nobody really cares how much we know about anything. Our only value to a company, a customer, or a client is directly linked to whether or not we can solve a problem they have. A brain surgeon with medical degrees from the most acclaimed schools in the world, with articles published in every prestigious medical journal in the world, is of little use to you in your hour of need if he's all thumbs during the surgical procedure.

Most of us agree that MultiValue allows us to do more in less time. Charge accordingly. In fact, there is one school of thought that says that since MultiValue isn't taught in schools, we possess unique skills for which we ought to charge more than the typical DB2 or Oracle consultant does. If "certified" SQL Server programmers are a dime-a-dozen, why are you selling yourself for a nickel?

Yes, I hear the comments about how, "In our area of the country we can't charge what they do in the Northeast." Field Muffins! I live in San Diego but do work all over the country. I have small two and three person shops in the middle of No-Where that don't even sneeze at my full rate. Why? Because they are not paying me to be a MultiValue programmer. They are paying me to solve their problems.

"The MultiValue market is a lot smaller than the mainstream market, so you can't charge as much." Hm. By that logic you would think doctors specializing in Ob-Gyn can only charge half as much a general surgeon because their "market" is only 50% of the population.

Another complaint I hear is that you can't charge $110 an hour when there are people on the xyz List and comp.databases.pick who will work for

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