

# 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 Inter-

Systems 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.

**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 integrat-

ed 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.

**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.

**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.

**INTERSYSTEMS**

[www.InterSystems.com](http://www.InterSystems.com)