

# SD Times

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SPECIAL REPORT: XML & WEB SERVICES

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## Microsoft Plans Testing Tools, Modeling For Visual Studio

**BY JENNIFER DEJONG**  
SAN DIEGO — Microsoft Corp. late last month sketched out an ambitious plan to add enterprise modeling, testing and change management features to its integrated development environment. While the vision seems complete, the actual tools won't ship until the first half of 2005 at the earliest.

At its Tech-Ed conference held here, Microsoft announced Visual Studio 2005 Team System. The suite of life-cycle management tools will replace the Enterprise Architect and Enterprise Developer editions of Visual Studio, said Microsoft's

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## BEA Buzzes About Beehive

Opens framework in hopes of forging a 'standard'

**BY YVONNE L. LEE**  
SAN FRANCISCO — BEA Systems Inc. tried to stir up interest in service-oriented architectures in advance of its late May eWorld show held here by releasing part of the WebLogic architecture to the open-source community. (Show Report, page 18)



The Java standardization process takes time, says BEA's Dietzen.

Beehive, as the project is called, is a development framework that sits between the application server and the application itself. This abstraction layer simplifies a development process that BEA vice president of develop-

er relations Cornelius Willis compared to constructing a building with blocks as opposed to "hacking out of raw steel."

The framework has three subframeworks, which contain components developers use together to create applications: Controls, NetUI Page Flow and Metadata for Web services.

Controls provide client access, configuration, automatic resource management, and context services, as well as a way to create new controls.

Developers build applications by placing the controls,

which are addressed using XML, Willis said.

NetUI Page Flow is based on Apache's Struts framework and adds information about the state of individual components. It orders the direction of the application based on the state information.

The Metadata part of the framework is based on the Java Community Process' pending JSR 175 and JSR 181 specifications, and allows classes, interfaces, fields and methods to be marked as having particular attributes, and enables Web services to be defined in a container.

Future WebLogic Platform versions will ship with the closest released version of the Bee-

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## Is Sun Toast?

Recent changes may not be enough to turn ailing company

**BY YVONNE L. LEE**  
Its earnings and stock price have been in a steady decline for years. Competitors are clamoring for it to release its grip on Java technology. It plays second fiddle in markets it helped to create.

Things have been grim for Sun Microsystems Inc. the past few years, with IBM Corp. and Microsoft Corp. gaining ever more traction. So, on

the eve of the 2004 JavaOne conference, industry observers are asking: Is Sun toast?

The once-stout Silicon Valley company has a trailing 12-month profit margin at nearly negative 20 percent. While revenue in fiscal 2003 was US\$11.4 billion—close to the \$11.7 billion it took in in 1999—the company posted a net loss for 2003 of \$2.37 billion.

What's more, Sun isn't even close to being the market-share leader in Java servers or development tools, even though it invented and owns the technology. Leading Java vendors BEA Systems Inc. and IBM have been calling on Sun to give over more control of Java and even to make Java open source.

**COMMITTED TO JAVA, NOT NECESSARILY TO SUN PAGE 19**



On the other hand, Sun recently shook up its executive management, beginning with naming Jonathan Schwartz, who had been executive vice president of software, to the No. 2 spot as president under chief

executive officer Scott McNealy. It has trimmed its work force by 9 percent, or 3,300 workers, but still employs 21,300 worldwide. It has settled its lawsuits with Microsoft, and in return will

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# IBM to Court: Put an End to SCO Suit

BY YVONNE L. LEE

IBM Corp. apparently has had enough of The SCO Group Inc.'s claims of property rights infringement and has asked Judge Dale Kimball to essentially throw out the yearlong suit.

In the first of three filings on May 18, IBM argued that in the seven-month discovery period, SCO failed to comply with repeated requests to show the specific lines of code where it believed IBM infringed on its intellectual property rights.

"SCO refuses...to disclose its purported evidence that IBM's Linux activities infringe SCO's alleged copyrights, despite two court orders requiring it to do so," IBM said in its motion for a partial summary judgment. "IBM asked SCO (more than seven months ago) to identify the precise lines of Linux code in which it claims rights, and the precise lines of code in the UNIX software from which SCO alleges such Linux code is copied or derives. Unless SCO can match up the lines of code in Linux to which it claims rights to the precise lines of code in the UNIX software over which SCO claims copyright protection, SCO cannot show copyright infringement."

IBM asserted that "based on

its silence and failure to provide evidence," SCO had admitted that IBM's Linux activities did not infringe on SCO's alleged copyrights.

SCO's copyrights are being disputed in this case and in a separate action Novell Inc. filed in defense of a libel suit SCO filed against it.

In addition to the motion for a summary judgment, IBM filed a motion against SCO's motion to extend the trial date from its

scheduled beginning date of April 2005 to September of that year, and a motion against SCO's earlier motion to dismiss IBM's request for declaratory judgment of noninfringement.

A declaratory judgment determines the rights of parties without ordering anything be done or awarding damages. In this case, it would be a statement that IBM did not infringe on SCO's intellectual property in contributing to Linux.

A motion for a summary judgment can happen at any point when there are changes in the circumstances of a case, said John Ferrell, co-founder and chairman of the intellectual properties practice group at Carr & Ferrell LLP in Palo Alto, Calif. Although he said such motions are "lottery chances," they are common.

"There's often huge upside if you win," he said. "Just having the motion creates momentum."

In addition, he noted they can be used as leverage if the two sides are negotiating a settlement.

"For example, maybe IBM has offered to settle this case—I'll just throw out a number—for \$100. In the event that motion is granted, SCO will get nothing," he explained.

The move comes in the wake of two major investors, Baystar Capital and the Royal Bank of Canada, pulling out their stakes in SCO. ■

## OSDL to Linux Developers: CYA With DCO

CEO won't link effort to track new code contribution to ongoing litigation

BY EDWARD J. CORREIA

Open source is no longer synonymous with anonymous, at least as far as the Linux kernel goes. Beginning in late May, a program was implemented by the Open Source Development Labs and Linux creator Linus Torvalds that requires all future contributors to the operating system to identify themselves.

According to OSDL CEO Stuart Cohen, the program, known as the Developer's Certificate of Origin (DCO), had been in the works for some time and was not a response to legal actions brought by The SCO Group Inc. regarding claims that

its intellectual property has made it into Linux. "This has very little to do with SCO; it's really about the maturing and acceleration of Linux," he said, adding that as Linux adoption continues to increase, corporations are demanding more accountability as to its origins. "There's a level of peace of mind that small and large users want to see. How do you know where each line of code came from and when was it submitted?"

Cohen described the DCO as a simple procedure under which contributors submit their name and e-mail address with their code. "These go into a file

that becomes part of the kernel," he said. OSDL also will maintain a database that Cohen said will simplify quick access to contributor data. Cohen said that information will be vetted by maintainers of the subsystem for which code is contributed, and by Torvalds and kernel 2.6 maintainer and fellow OSDL employee Andrew Morton.

But because the DCO involves only future contributions and does nothing to identify current codebase contributions, one analyst believes the program is flawed. "You're carrying legacy code in the kernel forward," said George Weiss, vice president of

Gartner Inc.'s server group. "And while Linus Torvalds says he'll vouch for parts of it, other parts are too much of a bother. So how does that help? That doesn't prevent any company from suing me or making a claim on software I'm running."

Cohen defended the decision not to attribute the current codebase. "SCO has so many suits going trying to scare people into signing licenses or into not doing anything. But if you look at the Linux growth numbers, that's clearly not the case. People feel very comfortable putting Linux in their mission-critical applications." ■

## Opening Up a Window From Either Side

Instantiations' Java interface design tool uses SWT or Swing

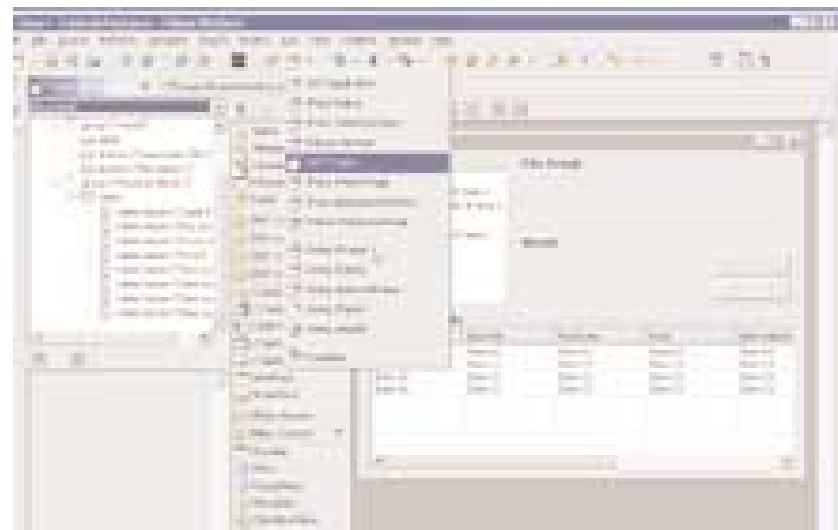
BY YVONNE L. LEE

Instantiations Inc. has made it possible for GUI developers to swing both ways.

Making good on a promise it made when it introduced its first Java interface design software, the company is shipping a product that it says can build interfaces using both Sun's Swing components and the Eclipse Foundation's Standard Widget Toolkit (SWT).

Actually, the Portland, Ore., company introduced two products in late May: a Swing Designer, which is the equivalent to the SWT Designer introduced last October, and Window Builder Pro, which combines the capabilities of Swing Designer and SWT Designer into a single package.

"The Window Builder [Pro] program is our enterprise-level



Window Builder Pro can build interface objects based on either Sun or Eclipse libraries.

product where you're in a big organization that you might need both," said CEO Mike Taylor. Swing Designer and SWT Designer are for work-

groups or smaller organizations that have chosen to use one design platform, he said.

Swing tools are more likely to be used by developers who

are building applications that can be ported to many platforms, said Mark Johnson, vice president of marketing and business development. SWT tools might be used in situations where the developer is building an application specifically designed for Windows or Linux, he said. Eric Clayberg, senior vice president of product management, added the SWT kit would

be better suited for developers building Eclipse plug-ins. Window Builder Pro works from a multipaned interface resembling an IDE or high-end

graphics application. Developers build interfaces by adding elements to the layout pane and change their attributes either directly within that pane or by setting them in the properties pane.

The editor in all three products is bidirectional, said Taylor. Developers can go to a code view and change the code directly, which will be reflected in the appearance on the layout pane, or they can adjust the elements by dragging and dropping in the layout pane, which will change the code.

Items such as buttons can be aligned using various techniques, including being aligned relative to a position in a window, being aligned relative to one another, and being aligned to a grid.

Window Builder Pro costs US\$299, and the SWT and Swing Designers are \$199 each. "[Window Builder Pro] is designed for the masses," said Taylor. "We're really hoping this does spur Java's re-emergence on the desktop." ■

# Software AG: Extract, Transport and View

Data presentation tool based on Web services, XML, enterprise service bus

BY JENNIFER DEJONG

Branching out well beyond its database roots, Software AG announced last month the XML

Business Integration Portfolio. Using Web services and XML, Portfolio extracts data from virtually any back-end

application and makes it available to business users in an easy-to-understand fashion, said Jonathan Airey, vice presi-

dent of XML business integration at the Darmstadt, Germany-based company.

Typically, business users are

limited to accessing data from the application in which it resides, he said. "For instance, you had to use SAP to access SAP data." Portfolio eliminates that need, he claimed.

The product includes three components: Enterprise Legacy Integrator, Enterprise Service Integrator, and Enterprise Information Integrator. It runs on Linux, Unix and Windows and works with Microsoft's .NET and J2EE development tools, said Airey.

Using more than 140 application-specific adapters, Legacy Integrator can extract SQL, non-SQL, JDBC and other data from applications such as Oracle, SAP and Siebel. Priced at US\$50,000 per server processor, Integrator does the extraction by automatically creating a Web services wrapper for the data, said Airey, adding that in most cases, no hand-coding is involved. But older applications written in PL/1 or early CICS may require developers to add comments to the code before it can be parsed, noted Airey.

Service Integrator, which costs \$25,000 per server processor, uses XML messaging to transport the data extracted by Legacy Integrator, said Airey. Vendors such as IBM Corp. and TIBCO Software Inc. offer products with similar capabilities, acknowledged Airey. But while IBM and TIBCO rely on proprietary messaging technologies, Service Integrator is based on the enterprise service bus, a standards-based messaging technology that uses JMS and J2EE Connector Architecture.

The term "enterprise service bus" was coined by research company Gartner Inc., in Stamford, Conn.

The third component in Portfolio is Information Integrator. Priced from \$125,000 per server processor, it provides a single view of the data extracted from multiple systems, sequenced in a useful fashion, said Airey.

Delivering data that way could help a bank, for example, quickly determine whether a customer applying for a loan is credit-worthy, said Airey. To answer that question, you have to query multiple systems, including those that store housing data, criminal records and financial information. "No single application can give you the answer," said Airey. "But when you expose all the data types, at the right time, in the right order, then you can make an intelligent decision." ■



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With the J2EE platform's portability features, there is no need to rewrite application code for different J2EE implementations. The Java AVK tests for portability and the correct use of J2EE APIs across compatible products. By maximizing code reuse and minimizing code rewrites, the Java AVK enables you to protect your software investment.

The platform vendors shown here offer application servers that pass the J2EE compatibility tests and demonstrate their commitment to the J2EE platform and its promise of portability and quality.



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## News Briefs

## COMPANIES

**Sun Microsystems Inc.** announced it has licensed **Embarcadero Technologies Inc.**'s Describe Unified Modeling Language design software as a module in Sun's Java Studio Enterprise development environment. There will be no additional cost for the module.

## NEW PRODUCTS

Neon Systems Inc. is offering **Shadow Interface for Enterprise Applications**, a host integration tool that allows mainframe-based terminal applications to be used within a service-oriented architecture. Shadow Interface is



designed specifically to work with 3270-based applications, and can convert the terminal screen to HTML, while providing business process scripting and orchestrated workflow . . . Actional Corp. has created **SOAPstation Developer Version**, a full-featured release of its Web services management software offered at no charge to programmers building applications. Deployment pricing for SOAPstation starts at US\$4,995 per server processor . . . The Middleware Company is offering **SOA Blueprints**, which the company describes as a set of best practices for building service-oriented architecture-based applications. BEA Systems Inc. was involved in creating those blueprints, and the first implementation of them is for the WebLogic stack . . . **Entegra for Oracle** is a new tool from Lumigent Technologies Inc. that provides audit reports on changes to an Oracle database.



Entegra is designed to help companies verify compliance with the Sarbanes-Oxley Act, the USA Patriot Act and other government regulations . . . MimarSinan International has released **InstallAware Professional**, an installation builder for Win32 platforms. The product is designed to generate scripts that run entirely within MSI, the Microsoft Installers. Pricing is US\$499.95 per seat. ■

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# Secure in the Use Of Open-Source Software

## Logic Library adds governance to Logidex platform

BY DAVID RUBINSTEIN

Thanks to the litigation begun by The SCO Group Inc., legal departments at major companies have been awakened to the liabilities they could face by misusing licensed, open-source code. And while many enterprises have decided to ignore those liabilities, others may want to gain better control over their intellectual-property exposure.

Making matters more complex, infringement upon IP rights has become even more dangerous with the number of new license types that have sprung up for open-source code. So last month, software asset management company Logic Library Inc. introduced a module to its Logidex platform that provides a checklist for compliance with the various open-source licenses.

Created in conjunction with Long Island, N.Y.-based law firm Rivkin Radler LLP, which

has a specialty in technology with deep knowledge of open-source issues, the US\$5,000 module is the first of what Logic Library vice president of marketing Alan Himler said would be an expansion into other types of governance issues.

Developers looking to incorporate an open-source component into a project using the Logidex platform would first have to answer a series of questions on a request form, such as whether the code will be modified, or if it will be used in a proprietary application. Then, based on the knowledge base built into the module, the developer could understand the ramifications of using a particular asset and determine whether or not its use is proper. Logidex and the new module integrate with the Eclipse development framework, Microsoft's Visual Studio .NET and IBM's Web-

Sphere Studio and Rational XDE environments.

"This way, if your organization is audited for open source, you can show you've been proactive, and that puts you in a better position" if litigation should arise from the use of code, Himler said.

Further, according to co-founder and vice president of technology Brent Carlson, organizations can build up a repository of trusted open-source assets. He added that Logic Library's best practice would call for keeping the request form with the asset, because the next person might not intend to use the asset in the same way it was used by the person who stored it to the repository.

Himler indicated that governance for sharing assets in a service-oriented architecture is next on Logic Library's drawing board. ■

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# Virtuoso Can Synchronize XML Data

BY YVONNE L. LEE

Database access vendor Open-Link Software Inc. has updated its Virtuoso "universal server" by adding XML data syndication and the ability to synchronize with mobile devices.

Virtuoso combines Web, database and application servers along with XML storage. As CEO and founder Kingsley Idehen described it, the product originated from the company's work providing ODBC, JDBC

and ADO database connectivity drivers.

"We thought since we can already homogenize SQL data, why don't we use that same capability to present those data sources as XML docu-

ments?" he said.

The new XML data synchronization in Virtuoso 3.5 makes it possible for organizations to create RSS data feeds. One use for this would be to create catalogs to which customers could

subscribe, Idehen said. RSS, or Really Simple Syndication, is an increasingly popular format for publishing XML information over the Internet.

"It presents a product portfolio using RSS such that not only do you present it on the Web site, but RSS clients can come to your site and choose to subscribe," he said. "You now have a pull model. [Customers] can interact with you on their terms, as opposed to your trying to push that out to them."

The other new feature is that it can synchronize to mobile devices such as phones and handheld computers that support the Open Mobile Alliance's SyncML specification.

Pricing starts at US\$550 for five concurrent database sessions. ■

## iWay Builds SOAPswitch Into Tools

BY YVONNE L. LEE

iWay Software Inc. announced a melding of SOAPswitch, which it purchased last year from Actional Corp., and its connector line. The new product makes it possible to expose the business applications as Web services, which in turn makes them easier to tie in with other applications.

iWay acquired Actional's SOAPswitch, Control Broker, Object Bridge and that company's related adapters, patents and existing license agreements, as well as 22 members of Actional's staff to support its Microsoft and SAP relationships.

SOAPswitch now makes it possible for organizations to take the connections from iWay's 250 connectors and expose them as Web services, said director of product marketing Jake Freivald.

"We take everything from the interface layer down and make it transparent to the user," he said, adding that this is done through a wizard. Freivald said by using the wizard, it is possible to create Web services within minutes without writing any code.

In addition to the revised SOAPswitch, iWay modified and renamed two of its existing products.

"ETL Manager is becoming Data Migrator," said Freivald. "The XML transformation engine is becoming Data Migrator RT." ■

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# Microsoft Plans Modeling, Testing Tools for Visual Studio

< continued from page 1

Prashant Sridharan, a senior product manager in the development division.

Comprising four editions—Team Architect, Team Developer,

Team Test and Team Foundation—the VS 2005 Team System tools will enable not only developers but also architects, operations managers, software testers and

project managers to jointly use Visual Studio, said Sridharan.

Team Architect will include the Web services designer Whitehorse, previously discussed by Microsoft, as well as a

class designer that enables code modeling and generation. Also, Architect will let IT managers determine whether the application under development can be successfully deployed on a com-

pany's existing IT infrastructure.

Unlike Visio, Microsoft's current modeling tool, the new class designer will synchronize code with the underlying model, said Sridharan. Visual Studio will continue to support Visio as well as the Unified Modeling Language (UML). But the modeling tools planned for Architect are not UML-based. "Microsoft is creating its own modeling notation separate from UML," acknowledged Sridharan.

He emphasized that VS 2005 TS will support some common UML diagrams and that Microsoft partners will provide complete UML implementations on top of the company's modeling engine and framework.

Team Developer is expected to include tools for unit testing, code coverage and static code analysis, which will collectively enable developers to catch errors and spot potential security holes, such as buffer overflows, before the application is completed.

Team Test promises load-testing features, which will let testers simulate how well an application will perform against a given number of users.

Team Foundation is expected to offer source code control features, said Sridharan. It will track bugs and code changes and offer reporting and analysis features that help team members manage work items across a project's life cycle. Visual Studio 2005 Team System will continue to support Visual SourceSafe, Microsoft's current version control system. While SourceSafe is geared to groups of about five developers, Team Foundation aims to provide change management capabilities across larger teams, noted Forrester Research Inc. principal analyst Uttam Narsu.

## CALLING THIRD PARTIES

Despite plans to add its own modeling, testing and other tools to Visual Studio, Microsoft is actively encouraging third-party companies to ready their sometimes-competing offerings for VS 2005 TS. Because the Team System is Microsoft's effort to extend its development technologies into homogeneous enterprise computing shops, getting other vendors to sign on to Team is critical. "They realize it's a fallacy to wish for an all-Microsoft environment," said

> continued on page 14

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> continued on page 14

# Microsoft Partners Line Up at Tech-Ed

Pledges of support for Visual Studio 2005 Team System, tool upgrades for VS.NET 2003

BY ALAN ZEICHICK

SAN DIEGO — While Microsoft Corp.'s Visual Studio 2005 Team System won't ship until the first half of next year, that didn't stop numerous ISVs from pledging their support of VS 2005 TS at the company's Tech-Ed conference.

Companies promising plugins for the enhanced IDE include Avicode, Borland, Compuware, Osellus, Sanctum, Telelogic, Unisys, Velocitis and Wise.

Beyond that, a number of vendors revealed new products or updates at Tech-Ed.

**ARTech** has revamped its DeKlarit rapid application development tool. Version 3.1, US\$899, now allows .NET Compact Framework-based applications to be connected directly to database servers.

**ArtinSoft Corp.** is offering JLCA Companion, an add-in to Microsoft's Java Language Conversion Assistant 3.0, which lets developers create new JLCA transformation rules and override its standard mappings.

**Atalasoftware Inc.** will be shipping DotAnnotate, an image markup and annotation plug-in for its DotImage imaging component toolkit for .NET.

**Borland Software Corp.** is offering a second release of Together Edition for VS.NET, its UML modeling plug-in that was initially offered for C#. Priced at US\$199 per seat, it now encompasses Visual Basic .NET, and adds functions for C# code auditing and refactoring.

**Compuware Corp.** released DevPartner Studio 7.2 Professional Edition. The VS.NET add-in improves static code analysis by applying Microsoft's recommended naming conventions, and also can now work with Microsoft Terminal Services.

**Empirix Inc.** released e-Test Suite 7.0, the first version of its testing software to encompass .NET testing. The software can test ASP.NET, Windows Forms and .NET-based Web services, and can integrate into VS.NET 2003.

**Identify Software Inc.** has updated its AppSight application monitoring and testing software. Version 5.0 now can capture application events within .NET Remoting, ADO.NET, Active Directory and Web services.

**Ivis Technologies LLC**

debuting NetBoost, an infrastructure application that adds security features, internationalization and look-and-feel "skins" to

ASP.NET apps, sites and portals built with VS.NET.

**LogicLibrary Inc.**'s version 3.1 of its Logidex for .NET asset management system can now

act as a gatekeeper for UDDI registries, and can improve workflow and reporting.

**Velocitis Inc.** has released Flywheel Professional 7.2, an

update of its modeling software for VS.NET, with new refactoring tools and enhanced visualization of multiproject and multilanguage applications. ■



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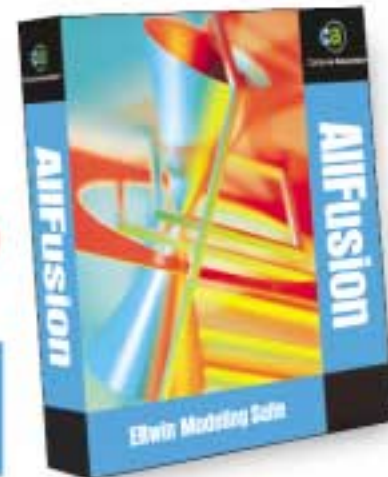
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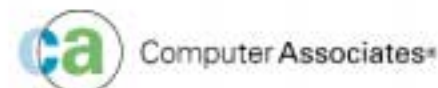
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# Microsoft Plans Modeling, Testing Tools

← continued from page 12

Narsu. "They are actively courting enterprise customers."

Microsoft released a prebeta preview of VS 2005 TS at the Tech-Ed conference, and has promised a beta before the end

of 2004, and shipment of the complete software in the first half of 2005. However, Forrester's Narsu said the company cannot deliver Team in 2005, because many of Team's features—particularly the model-

ing capabilities—depend on the next version of Windows XP, called Longhorn. Microsoft's Sridharan, in a statement, denied Narsu's claim, noting that the development cycles for Longhorn and VS 2005 TS are

independent of each other.

Also at Tech-Ed, Microsoft announced Web Services Enhancements (WSE) 2.0, a free add-on to Visual Studio and the .NET Framework, available at [msdn.microsoft.com/webservices/downloads/default.aspx](http://msdn.microsoft.com/webservices/downloads/default.aspx). It lets developers more easily build Web services that comply with

the WS-Security protocol, recently approved by the Organization for the Advancement of Structured Information Standards (OASIS), said Microsoft's Rebecca Dias, product manager for Web services. Also, Microsoft offered a technical preview of the WSE BizTalk adapter ([www.microsoft.com/biztalk/evaluation/adapters/wse.asp](http://www.microsoft.com/biztalk/evaluation/adapters/wse.asp)), scheduled for release in a few months, she said.

In addition, Microsoft announced the beta release of the Office Information Bridge Framework ([msdn.microsoft.com/office](http://msdn.microsoft.com/office)), which lets developers use Web services to link Office apps to business applications.

Finally, addressing customer complaints that product support plans expire before upgrades are ready, Microsoft extended support for all of its business and developer software to 10 years. The policy was expected to go into effect June 1. ■

Alan Zeichick contributed to this story.

## BUILDING OUT VISUAL STUDIO

### MODELING

- Distributed service designer: A Web services designer, known as Whitehorse.
- Class designer: Code modeling and generation tool that can synchronize code with underlying model.
- Logical Data Center designer: Lets IT managers determine whether an application under development can be successfully deployed on a company's existing IT infrastructure.
- Continued support for Microsoft's current modeling tool, Visio, as well as the Unified Modeling Language (UML). But the new modeling tools are not UML-based.

### TESTING & PERFORMANCE

- Tools for unit testing, code coverage and static code analysis.
- Load-testing tools to simulate how well an application will perform.

### CONFIGURATION AND PROJECT MANAGEMENT

- Enterprise-level version control management system.
- Continued support for SourceSafe, Microsoft's current change management tool that supports up to five users.
- Reporting and analysis tools to facilitate project management across the development life cycle.

Source: Microsoft Corp.

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# TimesTen Database: Smaller Modules, Bigger Audience

BY EDWARD J. CORREIA

In-memory database developer TimesTen Inc. this week launched a strategy to divide and conquer. By dividing its Real-Time Events Processing

System 5.0 into three smaller parts, the company hopes its in-memory transactional database system will conquer an enterprise market broader than its traditional base of

telecom and financial services companies.

With the June 14 release of TimesTen 5.1, the company breaks its product into Transact, Cache and DataServer

modules, the latter of which is its relational database engine for C/C++, Java and SQL developers. Now optional, Transact adds multiphase commit capabilities and real-time

data publishing, and Cache enhances transaction performance by caching data from DataServer or third-party ODBC or JDBC relational back-end systems.

According to TimesTen vice president of marketing Tim Shetler, DataServer now delivers security features that are aimed specifically at enterprise developers. "TimesTen was never built to worry about security; that was usually handled by the application into which TimesTen was embedded."

The company added security commonly found in other database engines, Shetler said, because for general-use applications, developers usually require access control at the database level. "IT departments are very nervous about who has access to data, who can read and update it, add new tables, and so on."

The newly separated Transact module also now includes beefed-up reliability, Shetler claimed. "We now guarantee that the standby node is actually more current than the primary node when it comes to committed transactions." This is done, he explained, by committing transactions on standby nodes before the primary. "So if the primary node goes down and I fail over to the standby nodes, they already have the very last changes; nothing is lost."

## IN SYNC WITH ORACLE

For organizations using TimesTen Cache with an Oracle back-end database, Shetler said the module in version 5.1 also improves synchronization performance between the two. "We now have direct access to Oracle's transaction log."

The new version also includes integration with TIBCO's Rendezvous message bus. "Developers no longer have to write the logic to publish and subscribe to messages traveling on this bus," he said.

Support for JMS and IBM's MQseries will follow next, he added, but gave no time line.

TimesTen 5.1 for Linux, Unix and Windows is priced by transactional capacity and server configuration, and typically starts at around US\$50,000, according to Shetler. ■

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Greg O'Connor, President

# Component Makers Add Functionality to BEA

BY YVONNE L. LEE

SAN FRANCISCO — While BEA Systems Inc. was upstairs at eWorld announcing its future strategy, third parties announced components that add additional



capabilities to BEA's WebLogic Workshop application.

**Actuate Corp.** introduced a free set of JSP tags to use in Web applications to build and centrally manage reports. Actuate's

**ReportingEngines** division introduced Formula One for BEA WebLogic Portal Reporting, a tool for analyzing data about portals from within WebLogic Workshop.

Server technology that **Back-**

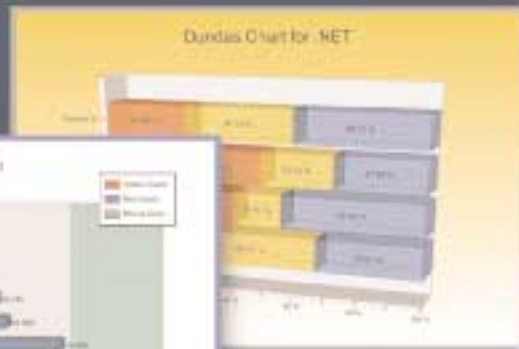
**web Technologies Ltd.** unveiled makes it possible for WebLogic Workshop developers to create portal applications that can be run offline. With the software, organizations can create Web portals that mimic online

behavior when the user is not connected to the network.

**Blue Titan Software Inc.** unveiled its Network Director 3.0 service-oriented architecture fabric and metadata management software. The management software, Data Director, makes it possible to control the metadata that is generated by the SOA. Both products are due to ship later this year.

**FatWire Software Corp.** released its US\$25,000 per-server Spark 6 pCM (portal Content Management) for the BEA WebLogic Portal 8.1 and introduced FatWire's BEA Control Bridge for BEA WebLogic Workshop 8.1. Control Bridge gives access to all content and assets, regardless of data type, stored in FatWire Content Server repositories. ■

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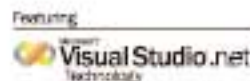
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## COLLABNET CASTS OFF SOURCECAST

BY DAVID RUBINSTEIN

Goodbye, SourceCast. Hello, CollabNet Enterprise Edition 3.0.

With the addition of new Project Dashboard, Task Management and CollabNet SCM components to the software service, CollabNet Inc. has made a move beyond code and felt the name change was appropriate, said Bernie Mills, vice president of marketing.

Project Dashboard and Task Management are options that can be added to the collaborative environment. Dashboard provides real-time reports and graphs of developer activity, including which tasks are at risk and which are on track, while Task Management provides a way to extend Microsoft Project plans into a developer's work space, Mills said.

CollabNet SCM replaces CVS, which was used in SourceCast, Mills said. Collabnet SCM is based on the open-source Subversion project that CollabNet sponsored and incubated, he added.

Like SourceCast, the US\$200 per-user per-month service can either be hosted by CollabNet or installed behind a company's firewall. Project Dashboard and Task Management add \$30 each per user per month to the cost. ■

# Corporate Developers Committed to Java, Not Necessarily to Sun

They associate themselves more with their own vendors but monitor evolution of standard

BY JENNIFER DEJONG

Unlike the Wall Street pundits, corporate developers aren't in the business of making predictions. But that hasn't stopped those committed to Java from voicing their views about Sun.

"For Sun to have such a hold on Java seems a little silly to me," said Peter Underwood, vice president of software development at Wall Street Access, a N.Y.-based brokerage firm. It's time to release the programming language to the open-source community, he said.

Placing Java in the public domain will gain Sun Microsystems Inc. huge respect from developers, said Chris Crowhurst, vice president of enterprise architecture at Thomson Prometric, a computer-based testing and assessment services company based in Baltimore. "Sun makes phenomenal hardware. It has a great operating system. And it helped create a fabulous programming language," said Crowhurst, who runs a mixed Java and Microsoft shop. "But why they need to control Java, I don't understand."

In the past couple of years, the industry has proved that open source can work, said Underwood, who relies on IBM WebSphere products, as well as a host of open-source tools. "Two years ago, I would have said, 'No way.' But now it makes sense."

While developers have a vested interest in how the Java standards evolve, they don't necessarily follow the Java Community Process. Monica McArthur, a software architect at Call Source, in Los Angeles, said she keeps one eye on how the Java standards are evolving in order to avoid using vendor-specific implementations of Java technologies.

"We are allergic to anything that's proprietary," she said, referring to the nonstandard way BEA Systems Inc. implements JSP tags in its WebLogic application server. Call Source sells toll-free telephone and related services to advertisers.

Praveen Sharabu, IS development manager at Con-Way Transportation Services Inc., a freight transportation company in Ann Arbor, Mich., is an IBM WebSphere customer, but he also keeps a close watch on Sun.

"It's our bread and butter. We very much care about what happens to Sun," he said.

The key reason why? "There is still a lot of work left to do

with Java," said Sharabu. For instance, he finds the current implementation of Enterprise Archive files, known as EARs, difficult to reuse and deploy in

a sensible way. "They're geared more to companies building commercial products than to those developing corporate applications," he said.

Still, Java's future is assured, regardless of which way Sun heads. "Whatever happens, the Java standard will stay alive," said Sharabu. ■



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Michael Barr, former Editor-in-Chief of *Embedded Systems Programming* magazine, is the founder and president of Nettrino LLC. Michael has spent more than a decade developing embedded software, device drivers and system-level software. He has written two popular books, *Programming Embedded Systems in C and C++* (O'Reilly), and the *Embedded Systems Dictionary* (CMP Books) with Jack Ganssle.

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#### **Karim Yaghmour**

Karim Yaghmour is President of Opersys Inc., a company that helps others build embedded Linux systems. Karim is a widely recognized figure in the open-source community and the author of the most popular book on Embedded Linux, according to Amazon.com: *Building Embedded Linux Systems* (O'Reilly). Karim is also the maintainer of the Linux Trace Toolkit, and has been selected as a Special Supporting Member to the CE Linux Forum.

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# Can Recent Changes Save Sun?

< continued from page 1

receive nearly \$3 billion.

In addition, the company says that it will return to profitability by the close of this fiscal year, which ends June 2005.

But it remains to be seen whether those changes are enough, whether they've come too late, and whether Sun can adapt to make additional changes necessary to thrive in the long term.

## HOW SUN GOT THERE

Several experts agree that Sun got in this position because the market itself changed.

"They have deep structural conflicts in all their markets," said Bill Whyman, president of The Precursor Group, an institutional investment firm in Washington, D.C. "They have SPARC and the whole world is moving to x86. With respect to Solaris, the world is moving toward Linux. IBM may be the natural owner of Java, but Sun is the legal owner. Sun has been unsuccessful building a business model around Java. The only

area where I see leadership is around Java smartcards and Java mobile and in the [telecommunications] carrier market."

"There are a lot of things that are beyond Sun's control that's affecting them in the software market," said Shawn Willett, principal analyst at the industry analysis firm Current Analysis. Companies such as Oracle, SAP and Siebel with specialized software for specific industries have made the lower infrastructure level layers less important, he said.

"I think they need a response to the verticalization, and they don't really have it," he said.

## DIPLOMACY AND COMMUNITY

Yet recent moves, particularly the truce with Microsoft, has observers looking up.

"We were one of the first analyst firms to be down on Sun, but with some of the recent changes, we've tempered [that assessment]," said Janelle Hill, senior program director at the computer industry research firm Meta Group

Inc. in Stamford, Conn.

"The détente with Microsoft really should help," said Clay Ryder, executive vice president of the technology research firm The Sageza Group Inc. "It's going to send a message to the marketplace that if you have Windows-based equipment, you're going to be able to use them together [with Sun's]. People don't like to buy things that can't interoperate."

While the easing of tensions with Microsoft should open some doors and relieve some financial pressure—the \$3 billion Sun is receiving from Microsoft as a result of the settlement is more than half of its net tangible assets at the end of the most recent quarter—it's not a long-term solution.

"The rapprochement with Microsoft is something and nothing. I don't view it as a profound change in the landscape. Microsoft is keen to settle outstanding issues and is aware that it is under quite a lot of pressure in Europe," said Gary Barnett, analyst at Ovum Ltd. "I believe

hostilities will resume in fairly short order. Over the next five years, Microsoft is going to compete incredibly viciously with competitors." Sun will have to learn IBM's secret of what others have termed "coopetition," he said. IBM and Microsoft compete vigorously on accounts, but collaborate on standards when they deem them to be in their best interests, he said.

"There are some technical reasons why it may be difficult for Sun to open up J2EE, for example," said Barnett. "There are lots of contributors who will always have to agree. They have tried through the JCP to at least have a more collaborative environment. Sun can retain enough ownership of the testing and compatibility of J2EE." Many parts may not be that useful for developers to have as open source, he said.

"At the end of the day, Java is intellectual property owned by a corporation," said Ryder. "Java is going to behave differently [than Linux] because it's someone's lifeblood as opposed to a hobby."

## SOLVING FOR X

While most agree that Sun is in trouble, very few have come up with solutions about how to fix it.

"One important thing for Java is its relationship with Linux," said Barnett. "The goal should be to make Linux the no-brainer place to run Java."

Although some analysts say Sun is moving in the right direction, it may be too little too late, said Meta's Hill.

"They staunched the bleeding that was akin to a cut artery down to a paper cut or small wound," said Sageza's Ryder. "I don't think they're in deep snow, but there's still a lot to do."

Ultimate responsibility resides at the top, and analysts have praised the move to elevate Schwartz, but they say more change may be necessary.

"Dumping McNealy would send the message that the feud with Microsoft is over," said Ryder. "When [Bill] Gates stepped down as CEO of Microsoft, that would have been a time for McNealy to step down. If the company's not able to turn around over the next year or two, one will have to ask whether McNealy is the guy to have at the helm." ■

# BEA Buzzes About Beehive

< continued from page 1

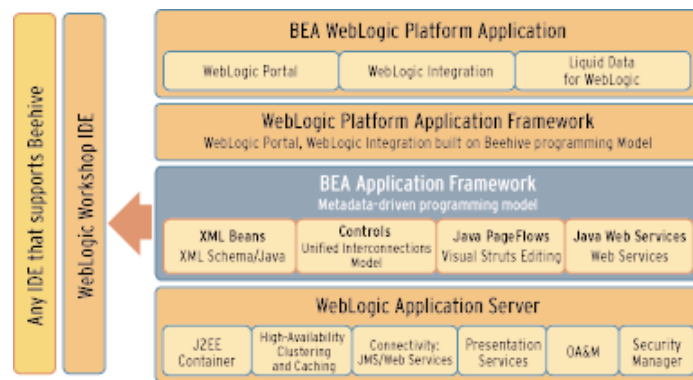
hive project, he added.

Part of the effort will be focused on making it possible to create Web services, Web applications and BEA-specific controls that can run on other J2EE servers or Servlet containers, such as Apache Tomcat. At eWorld, BEA announced that Beehive had been accepted as an Apache effort. As such, BEA retains the intellectual property rights to the portions it has submitted, and under the liberal Apache license, those who make changes to the source are not required to submit them to the open-source community as they would in a GPL license.

## BUILDING A 'STANDARD'

BEA officials cited several reasons why the company released the proprietary framework as open-source software, but it wasn't lost on analysts that it was an attempt to make BEA's methods a de facto standard.

By releasing its particular framework as open source, developers can become acquainted with its programming methodology and then more



BEA's framework is designed to simplify the assembly of Web applications.

easily use the WebLogic stack as a deployment platform, said Shawn Willett, principal analyst at Current Analysis. "I think it's a really clever move on their part," he said.

"They don't give away the whole henhouse, but they may throw an egg or two out there," said Clay Ryder, executive vice president of analyst firm The Sageza Group Inc. "It is an attempt to drive the market more towards their liking."

BEA's open-source moves are not unique. For example, IBM Corp. has created momentum behind its recently spun-off

Eclipse development environment, which is the foundation for its non-open-source WebSphere Studio tool set, and the top Java development environment, according to a November 2003 study by BZ Research, a subsidiary of BZ Media LLC, publisher of SD Times.

BEA's goal is to capture not the development environment market, but the market for application servers, said Willis. The framework should work regardless of the tools developers are using, he said. "The way to win in the platform space is to have lots of tools."

BEA officials, including chief technology officer Scott Dietzen, have referred to the open-source effort as a way to "standardize" the framework, but they appear to mean standardization in the sense that Microsoft's Word is a de facto standard for word processing, not in the sense that XHTML is a de jure standard for markup. The framework has not been submitted to any standards body or vendor consortium.

"There are JSRs in flight that cover some of the intellectual property," said Dietzen. "The Java standardization process takes time."

"The JCP is effective for what it does, but it's only one part of the picture," said Willis. "Beehive does represent a new standardization process."

Other BEA efforts in this "standardization" include collaboration with selected other companies such as the work the company is doing with IBM on service data objects, simultaneous engagement in open-source efforts, working with standards bodies and consortia, and sales and marketing efforts, he said. BEA will continue to partici-

pate in the JCP, he said.

"The fact is they didn't submit this to the JCP; they submitted to the open-source community," said Current Analysis' Willett.

Both IBM and BEA have complained about the time it takes to get specifications through the JCP and the ultimate control that Sun Microsystems Inc. has over the process. At the same time, Sun, as creator and owner of Java, has chafed at suggestions that it should further open the Java Community Process or make Java open source.

In a question and answer session following the eWorld keynote, BEA founder, chairman and CEO Alfred Chuang pointed out that companies other than Sun now contribute more JSRs to the JCP than Sun does.

As much as BEA touts Beehive, the effort remains outside of established methods, Willett said. "They have their own definition of SOA," he said. "They include not only Web services, but these things called controls. You can bind to the control to get information. There's certainly going to be argument in the industry about whether this is a service-oriented architecture." ■

# Software FX Breaks the Language Barrier

The Chart FX for Java Architect explains the intricacies of maintaining a single code base for all Chart FX products

The release of the .NET platform posed an exciting challenge to us here at Software FX, in order to maintain our position as industry leader, we could not simply distribute our product in a .NET wrapper; we had to totally rewrite it in C# to take advantage of the platform's new features and improvements.

This required us to explore and work with the .NET platform in intimate detail, revealing the closeness between .NET and J2EE. Both object models are very similar; in particular the graphics APIs, heavily used in Chart FX, are nearly identical in functionality. Additionally, the C# and Java languages are very similar.

The possibility of a Chart FX for Java was growing parallel to the reality of Chart FX for .NET. As long as we were redesigning our product, why not expose Chart FX to Java users?

Although similar, the platforms are not identical. There are some fundamental differences. Thus, the burden of delivering the most powerful charting component available and maintaining different sets of source code without diverting a huge amount of our resources into porting needed to be lifted. Dual development would make it very difficult to create new features and extensions as they would need to be written, tested and integrated for both .NET and Java.

An idea began to take shape, suppose we were to build an engine that would

## FUNDAMENTAL DIFFERENCES BETWEEN CONTROL STRUCTURES OF JAVA & C#

- The concept of an assembly in .NET has no direct representation in Java.
- By reference parameters: out and ref in C# are not supported in Java.
- The concept of Value Types is not present in Java.
- .NET Boxing does not occur automatically in Java.
- Attributes for classes, properties, etc. are not supported in Java.
- Properties and Events are not supported by the Java language itself, however there are naming conventions that allow a component to expose them, namely the Java Bean Specs.
- Operator overriding is not supported in Java.
- There is no Licensing Standard for Java Components.

possibly even other platforms such as COM.

This would accelerate our time-to-market and ensure that our focus remain on building better products, giving us the freedom to improve as the burden of porting from one language/platform to the other would be virtually eliminated. So we did it.

### Translator Architecture

The translation process follows the illustration scheme below.



First, original C# code is passed to a C# Parser and transformed it into a CodeDom, a structured representation of the code within the .NET framework. Next, the CodeDom is passed to a Java Code Writer and the desired Java code is produced.

This modular design, based on the innovative CodeDom, allows us to translate other .NET languages (e.g. VB.NET, Delphi, etc.) by creating a

The parsing process is fairly straight forward thanks to the intermediate CodeDom. Translating the CodeDom to Java is the next step. Control structures and basic statements are almost identical in these two languages.

### Bridging the Gap

As we know, there are some fundamental differences between .NET languages and Java. These differences generate the need for ingenious

translation strategies. Here are some of the most interesting ones:

#### Value Types

As opposed to objects (Class Types), Value Types are allocated in the stack as they are declared- and are copied when they are assigned or passed as parameters.

#### Parameters by Reference

All parameters in Java are passed by value. This is not the case in .NET, the ref and out keywords in C# allows you to pass parameters by reference. Combine this with Value Types and it becomes very interesting.

When passing an object (Class Type) by reference an extra level of indirection is needed, for this purpose, the class ObjByRef is generated on the fly and encapsulates an object. The appropriate un-packing and re-packing

code is added to the beginning and end of the method and additional code if added after the call is made to return the values to the corresponding variables.

#### Boxing

Boxing is performed when a primitive type needs to be converted to an object. In .NET this occurs automatically.

Though the languages are similar, some situations require more sophisticated translation. Combining these situations increases the complexity exponentially. All of the solutions presented preserve the original design of the code and maintain the same level of performance; this is of the utmost importance.

#### The Finishing Touch

Having overcome each of these hurdles, we are able to translate our .NET code into very clean, efficient Java code.

Porting from the .NET Framework object model to J2EE is the next and most time consuming step. Limiting this stage to the libraries and classes that we use makes this daunting task more manageable. We concentrate on porting only our Server Side Components as we believe it is on the server where Java's strength resides.

This eliminates the need for porting all of the Windowing System (AWT/Swing) and leaves us with the drawing API, file IO, Reflection and standard classes such Collections, Arrays, Hash Tables, etc.

Keeping in mind our requirement of generating code that looks and performs as code hand written in Java, converting from one object model to the other involves not merely wrapping the J2EE classes into a .NET Framework shell but also creating some sophisticated code conversions making direct use of fundamental Java classes without wrapping them. For example, we keep the string handling in native Java instead of going through wrappers. The same is done with many other key performance related classes.

#### The Final Product

We invested in the future and it paid off. Instead of taking the easy, short road and building Chart FX for Java from scratch once, we opted for a more ambitious approach: building an engine that ports our current version of Chart FX to Java and ensures that we stay focused on developing more functionality and that this functionality will, with very little effort, be ported to our Java versions.

Due to the success of this project, we are developing parsers and code writers to port .NET code to COM (C++) to bring new developments to more customers. We also continue to improve our existing translation engines to include support for new functionality for all platforms.



Chart FX for Java



“Suppose we were to build an engine that would allow us to write code only once.”

allow us to write code only once, in C#, it being the language we started with, yet deliver it for .NET, Java and

parser for them. It also allows code generation in other languages by plugging in a different CodeWriter (e.g. C++).

#### ABOUT THE AUTHOR



Francisco Padron is a senior Software Architect and co-founder of Software FX, Inc. in 1993 and the publisher of Chart FX.

**SoftwareFX**

**Web Services Security**

Since Web services can be accessed across the open Internet, security risks are inherent in Web service development. Depending on the type of Web service you are creating, an appropriate level of security will need to be implemented. The gamut can range from firewalls, to simple transport-level security such as basic authentication and SSL, to a variety of XML-level security mechanisms such as SAML.

At the very least, you must implement the proper security standards to ensure authentication, authorization, data integrity, data confidentiality, and proof of identity. One way to do this is to implement the WS-Security specification set forth by the Web Services Interoperability (WS-I) organization.

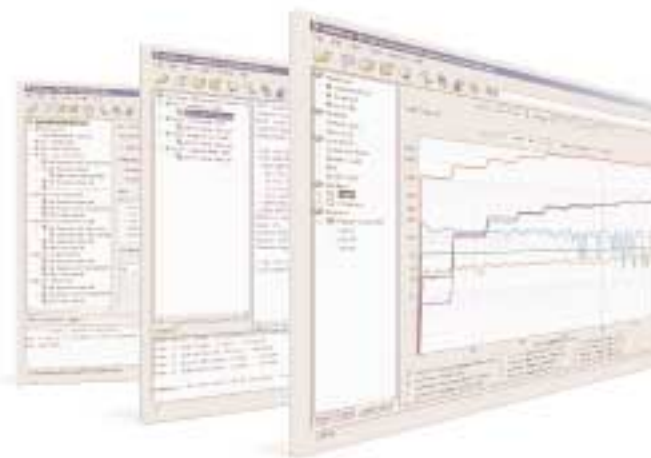
The WS-Security specification aims to define SOAP security headers and explain how they should be used. Developers should configure SOAP headers according to the following WS-Security specifications:

- Use security tokens to provide the server with client security evidence. Various tokens are available, and each contains different types of security evidence in various formats, which allows the message's target endpoint to verify client identity. For example, the Username token contains the name of the initiating client and an optional password.
- Use XML Signature to ensure that the message has not been modified. XML Signature is a standard that allows parts of an XML document to be digitally signed, thereby providing proof that the document has not been altered since the inclusion of the signature.
- Use XML Encryption to ensure that only the intended party can read the SOAP message. XML Encryption is a standard that uses cryptography to encrypt the SOAP message so that it is hidden from unintended viewers.

By following the standards set forth by WS-Security, you can create a more secure and reliable Web service, protecting the integrity and confidentiality of a message while also authenticating the sender.

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# BlackBerry Gets Generic at Wireless Symposium

## Solutions for integration with third-party back ends on display at RIM show

BY EDWARD J. CORREIA

The BlackBerry is branching out. At this year's Wireless Enterprise Symposium, organized by Research in Motion Ltd. on May 18 and 19 at the Chicago Marriott, solution vendors demonstrated that the devices can connect to more than just RIM's back end.

**Research in Motion (RIM)** itself was demonstrating its forthcoming BlackBerry Enterprise Server 4.0, which it says will include simplified application development, over-the-air deployment and enhancements to security and asset management capabilities.

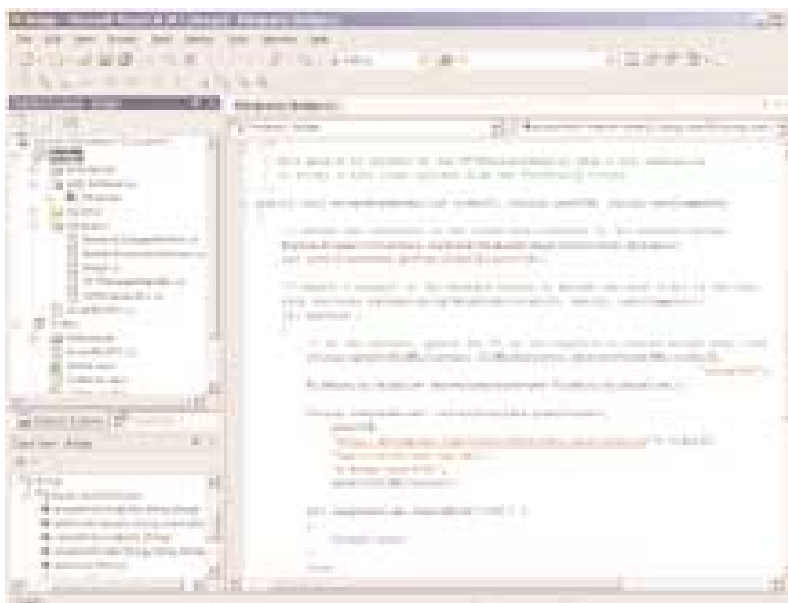
The software for Microsoft Exchange and Lotus Domino servers will add Advanced Encryption Standard (AES) to BlackBerry's list of protocols that already included Triple DES, Secure MIME and Federal Information Processing Standards (FIPS) government certification.

According to the company, an

enhanced Web browser and new Java tools will simplify development of applications for its Mobile Data Service, which links BlackBerry users with enterprise back-end data. Not yet in beta, version 4 is scheduled for release later this year.

**PalmSource Inc.** began shipping BlackBerry Connect, a tool co-developed by PalmSource and RIM that enables users of Palm OS-based devices to synchronize with the BlackBerry Enterprise Server and access BlackBerry wireless services. PalmSource also says it will release a version of its Palm OS Mail Client for BlackBerry Connect in the second half of this year.

Wireless application infrastructure developer **Flowfinity Wireless Inc.** was demonstrating an integration interface for its BlackBerry vertical application platforms for field service, inspections, sales and inventory



Flowfinity's back-end integration tools plug into Visual Studio (shown) and JBuilder.

management that it says allows them to connect to generic data-driven back-end applications such as CRM and ERP and to applications running on systems including PeopleSoft, Remedy, Siebel and SAP, and legacy systems including

IBM's AS/400. The company also announced support for Microsoft's BizTalk integration architecture.

**Epicad** gets Mac OS users into the BlackBerry act with SyncAgain, a new tool that permits synchronization of Mac

client data to BlackBerry wireless services, and remote viewing of Macintosh data from the BlackBerry browser. A stand-alone version for Mac workstations is currently being beta tested; enterprise and hosted versions are under development.

CRM solutions developer **Saratoga Systems Inc.** released iAvenue Wireless, giving developers what the company calls a secure method of connecting to enterprise back-end data systems including its own iAvenue CRM using the BlackBerry device browser.

**DynoPlex Inc.** has expanded the development program for its BlackBerry productivity applications and back-end server solutions. The company now permits developers to build applications that can interact with the company's apps for processing e-mail, attachments, remote file access, faxing and printing. ■

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**HIT SOFTWARE**  
Open Up Your Data

# Developers Finding Gold

Corporate developers are using open APIs to access Amazon, eBay sites to help create new market opportunities

BY SHARI L. GOULD

**T**he online business of buying and selling is changing.

Web services have expanded the sales channels for companies that consider Internet retailing a strategy for success—so long as they're willing to adopt a philosophy of openness. Companies such as Amazon.com Inc. and eBay Inc. aim to help their customers increase sales through the Amazon and eBay Web sites by providing access to their APIs using standards such as XML-over-HTTP and SOAP.

"A certain level of openness is required.... You're more successful the more transparent you are," said Jeffrey McManus, senior manager for platform evangelism at eBay.

Both eBay and Amazon.com provide access to their Web services catalogs and APIs through their respective developer programs. This allows their client companies to efficiently conduct business on

Amazon.com or eBay.com by developing Web services-based applications that integrate with Amazon's or eBay's back-end systems.

McManus said eBay offers "multiple on-ramps for Web services" that enable developers to access eBay's "Sandbox" test environment, via XML-over-HTTP, SOAP, traditional XML and, for Windows developers, a .NET wrapper.

"We decided to implement both (XML-over-HTTP and SOAP) and let the developers decide," said Jeff Barr, Amazon.com's technical program manager for Amazon Web services.

Barr estimated that 80 percent of developers in Amazon's community chose XML-over-HTTP to access Amazon.com's Web services, which include catalog information, product lists, the ability to make purchases and use of the shopping cart.

Whether to use XML-over-HTTP or SOAP is left to the discretion of the developer, Barr said. "The former works very well for string-oriented scripting languages such as PHP, Perl and Python. SOAP is often attractive to the devotees of strongly typed languages such as Java and C++."

#### DEVELOPING WEB SERVICES APPS

Offering generalized tips for developing applications that utilize Web services is challenging, said eBay's McManus, because every application is unique, using different languages and platforms.

Therefore, McManus offered just one tip for developers: Consider the taxonomy of a product's XML data and how products are categorized on eBay. For example, do not make an XML call for a list of products—which may be a 7MB document—more than once a day.

Barr offered Amazon.com customers some advice when it comes to develop-

ing applications for Web services.

Do not implement every Web services standard, he said, adding that companies should listen to their developers. Standards often are available before developers are ready to use them, and some may not apply for a particular organization's Web services strategy.

#### GETTING ON BOARD

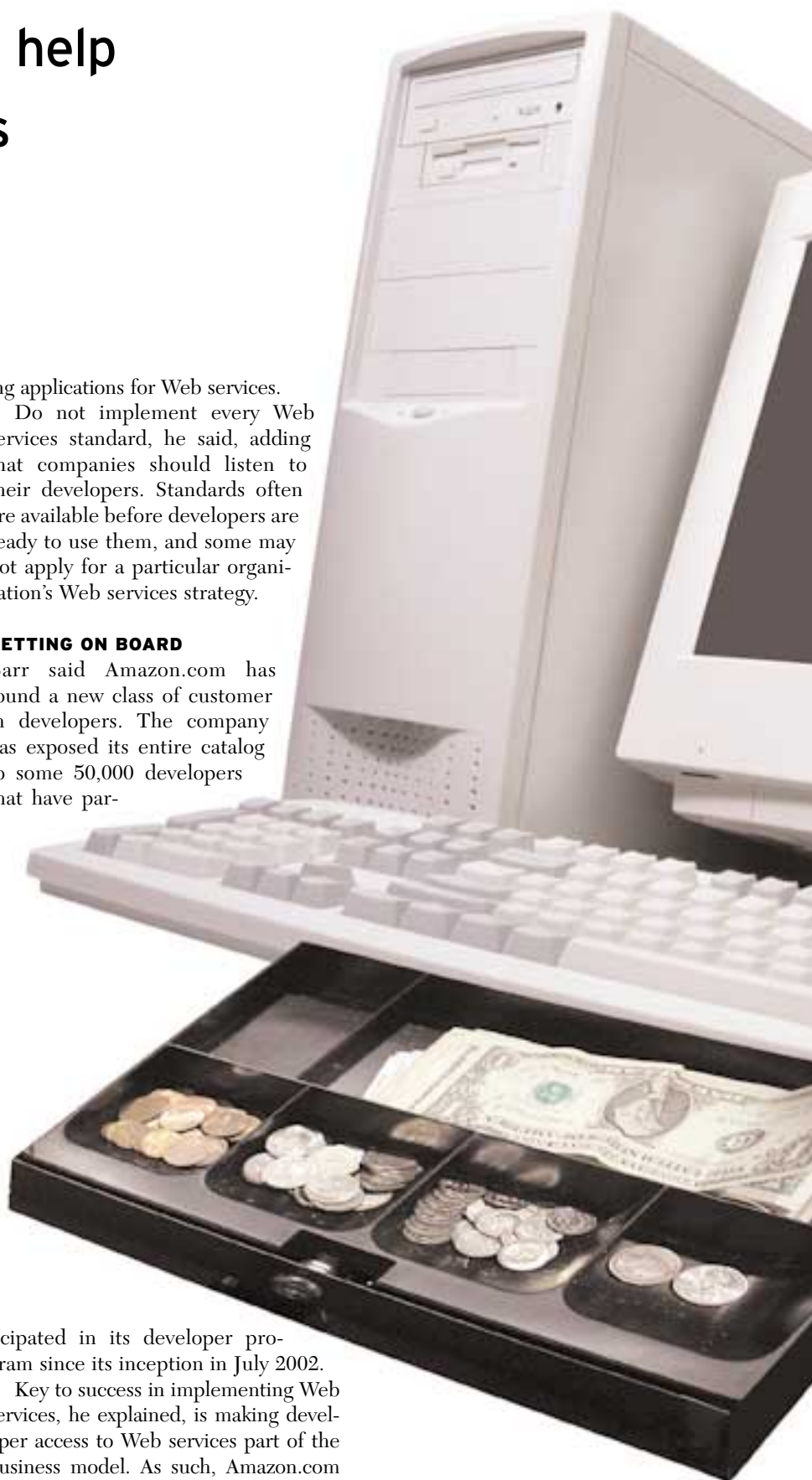
Barr said Amazon.com has found a new class of customer in developers. The company has exposed its entire catalog to some 50,000 developers that have par-

ticipated in its developer program since its inception in July 2002.

Key to success in implementing Web services, he explained, is making developer access to Web services part of the business model. As such, Amazon.com implements two business models: one for customers that sell on Amazon.com called the Marketplace Seller Model; and the Amazon Associate Model, where more detailed information can be



eBay offers 'multiple on-ramps for Web services,' says McManus.



# at End of the Application



**Amazon.com has found a new class of customer in developers, exposing its catalog to some 50,000 participants in its developer program.**

**—Jeff Barr, Amazon Web services**

retrieved from Amazon.com. They can retrieve Amazon.com data without coding and formatting by using a URL that represents their company's service, then specifying another XSLT transformation file. No server-side code is required, only a link and a stylesheet.

Regardless of the Amazon.com business model customers use, the data is returned in two ways: either in a summary format called the Light Data Model, or in a more detailed format called the Heavy Data Model. The Light Data Model returns a basic product list. The Heavy Data Model returns detailed data such as information about other sellers, product descriptions, customer reviews and specific tracks on various compact discs.

For eBay, exposing the company's APIs via Web services and making them available to its clients' developers adds a dynamic element to the eBay platform and the way business is conducted, McManus said. eBay.com's traditional community of buyers and sellers now extends to include developers. McManus called the inclusion of developers "key to managing the pace of change." The platform is updated every two weeks.

McManus said the company opened its Sandbox testing program to 2,000 third-party technology providers to integrate their Web services-based applications with eBay.com. The program began just prior to eBay's acquisition of Pay Pal, and has 500 live applications that use eBay's APIs. It allows developers to access, develop, deploy and test Web services in eBay's test environment. Developers then undergo a question-and-answer session and certification process to ensure their applications meet the required

standards to go live on eBay.

Greg Isaacs, senior manager for partner programs and market development at eBay, said, "As part of eBay's Developers Program, we expose these APIs to our growing developer community to allow them to interact with the eBay Marketplace and help us innovate on our platform."

#### THE SAP CONNECTION

eBay's Web services extend to SAP customers with SAP's development of an application that provides software connectivity from its SAP R/3 and mySAP CRM customers into eBay's platform. Yet to be named, SAP's eBay integration application should be released around October.

According to eBay's Isaacs, a likely use case is an enterprise that has excess inventory or idle assets and is looking to receive a better return on these assets relative to liquidation. "In order to leverage their embedded SAP infrastructure, the customer would purchase the appropriate SAP application, which would allow the customer to sell these assets on eBay.com. The SAP application would help manage the entire process of the eBay selling life cycle from listing the item to managing the checkout," Isaacs explained.

"This is important as thousands of companies rely on SAP to manage their business processes/infrastructure, and we want customers to use eBay in an efficient way by not having to drastically change their current business practices," he added.

SAP is using eBay's Web services APIs to accomplish this integration. For example, to place an item for sale on eBay.com, SAP is using eBay's

retrieved dynamically via Web services. Note, however, that developers do not have to be an Amazon Associate to participate in the Web services program, Barr said. But Amazon.com customers that participate in both programs can earn referral fees for sales.

To use the Marketplace Seller Model, developers for companies selling on Amazon.com simply make a Web services call to an Amazon.com service via

a search by some filtering parameter, such as by title, author or publication.

Developers that use the Amazon Associate Model for business use Extensible Stylesheet Language Transformation (XSLT) to format outgoing data from the Amazon.com server. They can categorize data to create and populate a Web site using an XSLT stylesheet and the XML response

# SuperPawn Spots Millions for the Asking

BY SHARI L. GOULD

One of eBay Inc.'s customers, preowned merchandise reseller SuperPawn Inc., was an early adopter of eBay's Web services in November 2002, and has become eBay.com's fifth-largest seller with its ztradingpost.com Web site.

Steve Mack, CEO of ztradingpost.com, said the company slashed the price of selling merchandise online from US\$22 per item to 25 cents per item in the first three months.

Mack also said ztradingpost.com became a \$3.5 million business via eBay.com without hiring any new employees.

With eBay's Web services, SuperPawn created ztradingpost.com, and uses a platform called zDrop as a backbone for companies that want to create a franchise or chain store for dropping off merchandise being sold at auction on eBay.com. More than 300 locations of companies such as Mailboxes Etc. currently are being licensed to use zDrop for back-end processing. These companies stand to earn a 28 percent margin when sellers use these drop-off facilities to auction and distribute to eBay.com purchasers.

Reducing the cost of sales was accomplished by using Web services to

drive the sales process of displaying product information for sellers, including digital photographs; monitoring the activity between the purchaser and credit-card processing companies; and handling the logistics for distributing the products.

The company uses no central distribution facility, so it relies on what Mack called "seamless integration of information back to the store."

SuperPawn developed an application called AuctionMonitor, linking SuperPawn's point-of-sale system called

PRIMA—Pre-Owned Retail Internet Management Analysis—to eBay.com. This application that was developed through the eBay Developers Program streamlines merchandise listing, categorizing and fulfillment.

Here's how it works: AuctionMonitor interfaces to eBay's API, enabling SuperPawn to sell used merchandise efficiently at auction via ztradingpost.com. The interface connects PRIMA with eBay and the SuperPawn Web fulfillment engine. AuctionMonitor gathers information about the items that SuperPawn

customers want to auction on eBay.com, items being physically delivered to SuperPawn's satellite locations running PRIMA. Auctions are posted to eBay.com applying specific business rules. With transactions being completed online, auctions are fulfilled directly from satellite locations. AuctionMonitor quickly redirects products through PRIMA to the appropriate eBay category using its dynamic system of category management. eBay.com customers are kept in the loop on the status of their auction throughout the process. ■

## Developers Find Gold at End of the Application

← continued from page 27

AddItem API call. eBay has more than 60 API calls that replicate a large majority of eBay's site functionality, Isaacs claimed.

Another example is checking the status of items placed on eBay.com—such as which items have bids on them and which items have closed successfully. SAP can make an API call to pull this information from the eBay platform.

"These are just two basic examples of how SAP is using our APIs, but you can see the possibility of a customer

using the eBay Marketplace through SAP's software without the need to ever go directly to eBay.com's Web site," Isaacs said.

### SECURING THE SCENE

Exposing APIs to developers to expedite buying and selling over the Internet brings with it concerns over security. However, both eBay.com and Amazon.com have what they called fail-safe procedures in place and deem security risks minimal.

Barr said Amazon.com always takes

security seriously, but "the opportunities for mischief are pretty limited."

Similarly, eBay's McManus said, "Security is a commitment for eBay, particularly when money changes hands." McManus credits the interfaces in place, namely SOAP, for minimizing security risks. "It just doesn't add up. You can't attack through a SOAP interface."

eBay's Trust and Safety Group serves as a watchdog for the company and its Web services customers. McManus said it's unlikely for "fraudsters to go through those hoops." ■

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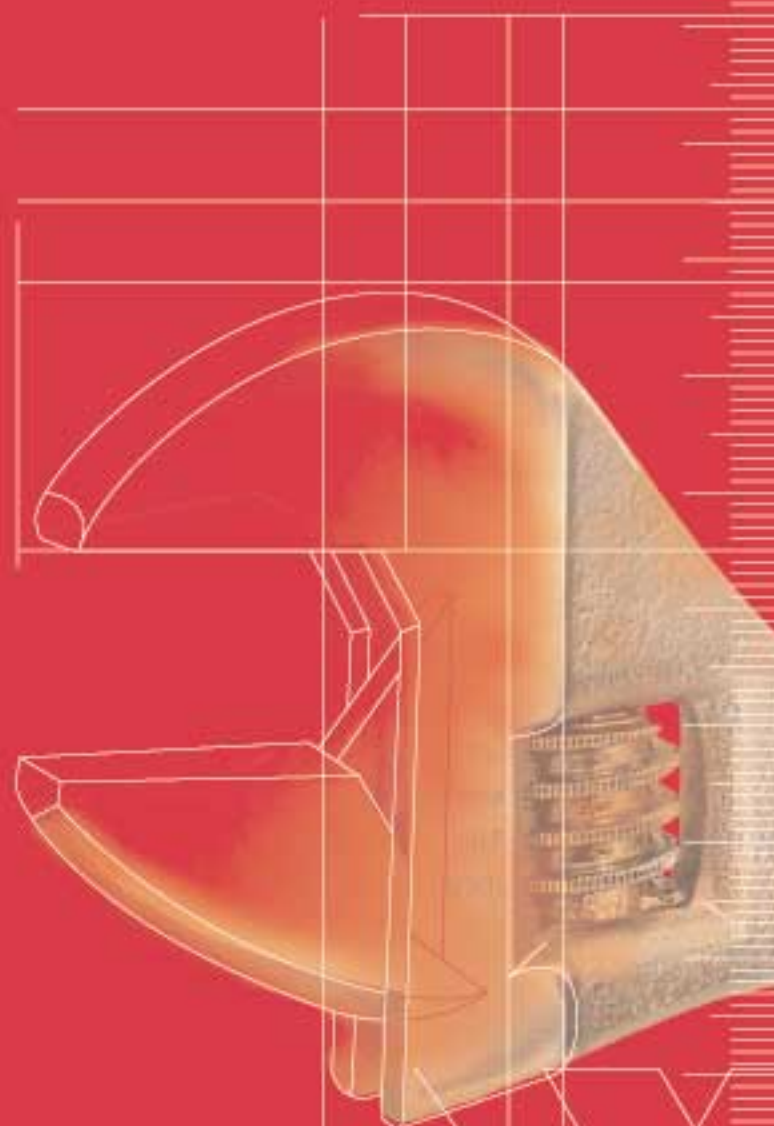
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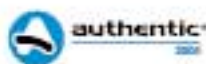
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## EDITORIAL

## Thinking in Teams

It's about time. While Visual Studio .NET is generally considered to be one of the best integrated development environments, even by its competitors, Microsoft Corp. has always left it to third-party tools providers to round out the application development life cycle. With the announcement of the Visual Studio 2005 Team System, the company is adding necessary core functions into the IDE, expanding it beyond coding for the first time.

Take testing. Microsoft will now include both dynamic and static code analysis, a code profiler, basic load testing, unit testing and test-case management tools with various editions of VS 2005 TS. That's a far cry from the limited debugger that has graced VS.NET 2003 and earlier editions of the IDE.

Or take modeling. Until now, Microsoft has paid bare lip service to modeling, offering some software architecture functions within its Visio modeling tool, but little more. Today, the company says that modeling will be a central function of VS 2005 TS. Similar new emphasis has been placed on project management, workflow and source control. Won't it be nice to have a better Microsoft SCM system than Visual SourceSafe? VSS is a fine product for very small teams, but quite inappropriate for large distributed enterprise development organization.

While it's too soon to comment on the quality of the implementation of those new functions—the beta is not yet available—this is a good beginning. Microsoft appears to be adding to the value of the base IDE while still providing room for those third parties to continue offering higher-value add-ins.

One could argue that Microsoft's bundling of these extra functions is anti-competitive and will reduce the profitability of third-party tools companies that already make testing, modeling, project management and source-code control systems for the Windows and .NET ecosystems.

While it's true that some developers will find the basic functions in VS 2005 TS to be adequate for their needs and won't look at the higher-end offerings from third parties, it's generally in the best interest of improving enterprise software quality for those capabilities to be available to the broader market of developers.

Microsoft seems sincere in its invitation for tools providers to extend (or replace) the functionality of its built-in tools with higher-end offerings. In fact, it's likely that once development teams have tasted modeling, testing and other life-cycle tools using the functions built into VS 2005 TS, they'll be ready to evaluate and adopt higher-end solutions.

Considering that the company's primary revenue stream is deployment platforms—Windows, Office, SQL Server, and so on—the hope is that Redmond will continue to embrace partners that enhance the developer experience and improve the efficiency of large software teams.

So, it's about time. Software development managers have long understood the need for their architects, coders and testers to have an IDE that embraces not only programming and debugging, but also covers the complete software development life cycle. It's good that Microsoft seems to have learned that lesson as well. ■

## Letters to the Editor

## GOOD FOR MANAGEMENT

This one statement in your article ["ITAA Says Offshoring Good for U.S. Economy, Workers," May 15, page 5, or at [www.sdtimes.com/news/102/story4.htm](http://www.sdtimes.com/news/102/story4.htm)] more or less sums up the fairy tale: "...savings...spurring investment in new IT projects and services and creating new jobs."

This argument is often used to defend various positions but is so untrue. When will people realize that when a large company makes savings, thus makes more money, it simply translates into higher salaries and bigger bonuses for senior management and possibly its shareholders? The money gained here will not be used to create more jobs—senior management does not need to create more jobs (at home anyway) to achieve their ultimate goal, which is more money for their own pockets.

I wish more people would face up to this simple reality.

John Dailey

## EXTREMELY INQUISITIVE

I have found Andrew Binstock's column consistently relevant and stimulating. When I read "Not So Extreme Programming" [May 1, page 35, or at [www.sdtimes.com/cols/integrationwatch.htm](http://www.sdtimes.com/cols/integrationwatch.htm)], I had to probe a little deeper since I'm wondering what sources led to his conclusions about Extreme Programming. What I see and have experienced leads me to very different conclusions.

I'm curious what information prompted his observation that "IT sites today, as a

rule, do not use XP."

At the SD West 2004 conference in Santa Clara in March, I met hundreds of attendees that use XP (or its principles) or are planning to use it for development work. Wired has published a feature on XP adoption at HP, and also mentioned that XP is being used at organizations such as IBM, Sabre, Symantec and Domino's Pizza.

While I can see how "Extreme Programming Refactored" could lead to his belief that UML is "anathema to XP principles," meeting XP practitioners may convince you otherwise. While agile methods place significantly less emphasis on UML than other methodologies, it is certainly a valuable tool and is used by many agile developers. For a high-profile example, consider Martin Fowler, a strong proponent of agile development and author of "UML Distilled" (a UML best-seller now in its third edition).

Mr. Binstock's question about XP putting a man on the moon is an interesting one. The core principle of XP doesn't eschew preliminary design work. It acknowledges that as time progresses and you get deeper into a project, external conditions and things that you learn will cause the requirements to change. The practices of XP are specifically designed to facilitate that flexibility. When your pilot leaves L.A. bound for Chicago, he has a flight plan. However, unpredictable winds and weather make continuous incremental corrections necessary in order to successfully execute the flight plan. My guess is that NASA's

development projects would benefit from agile methods. XP promotes testing, increased communication between customers (i.e., domain experts) and programmers, early and regular delivery of working code for "customers" to evaluate, and reduces "blackout" periods for management tracking development progress. I'd be willing to bet that most XP practices could be integrated into NASA's process in a very productive way.

Brian Ford

## SUN GOES APE

Since I first encountered Allen Holub's columns in DDJ years ago, I've enjoyed his writings. In the Java Watch column of May 1 ["Missed Opportunities," page 33, or at [www.sdtimes.com/cols/javawatch\\_101.htm](http://www.sdtimes.com/cols/javawatch_101.htm)], he hits the nail solidly on the head yet again. Sun definitely missed a couple of prime opportunities to improve the language and instead aped the boys in Redmond.

David Ramsey

## CORRECTION

A quote from BEA Systems Inc.'s deputy chief technology officer, Benjamin Renaud, regarding WebLogic Workshop was inadvertently attributed to IBM's Eric Naiburg in a story on Java tools that appeared in the May 15 issue.

Letters to SD Times should include the writer's name, company affiliation and contact information. Letters become the property of BZ Media and may be edited. Send to [feedback@bzmedia.com](mailto:feedback@bzmedia.com), or fax to +1-516-922-1822. Please mark all correspondence as Letters to the Editor.

## SCO'S INFLUENCE WIDELY FELT

I'm seriously curious. Yes, SCO's "legal assault" has been much talked about. But putting them at the top of "Influencers" just for that? ["The Best of the Best—SD Times 100," May 15, page 25, or at [www.sdtimes.com/news/102/special1.htm](http://www.sdtimes.com/news/102/special1.htm)].

Exactly who have they influenced? The only influence I've seen of this conversion of an IT company into a litigation monster is that their customers are working their way over to Linux. Or any other OS not run by a company that prides itself on litigation rather than innovation.

So please, tell us, since they are the No. 1 "influencer," exactly who have they influenced?

Joe Sullivan

Giving SCO an award is tantamount to engaging in a night of pleasure with that guy with the pitchfork and horns.

How could you? Where are your scruples? Your decency? Your ethics? Your morality?

SCO has chosen a dark road to prosperity—higher-ups selling off their stock, ripping off foolish stock purchasers.

Is this how we do it now?

Use every filthy, dirty legal trick we can to increase the bottom line?

What kind of a people, a country, are we becoming?

Mystified,

C Jones

I really enjoyed reading your list, which provided a comprehensive view.

I was amused to read SCO's press release (<http://ir.sco.com/ReleaseDetail.cfm?ReleaseID=135327>) about your list, however. The press release sounded like you had hailed them as a market leader rather than as a force inspiring FUD.

Jim Elliott



# The Real Argument for Industry Standards

We hear a lot about the importance of standards. And the standards argument usually centers on guarding against vendor lock-in, since lock-in can be an expensive prospect. You will even find that most vendors readily acknowledge this benefit.

While I do not dispute that avoiding vendor lock-in is of some importance, I do argue that of far more significance is the role industry standards play in reducing the overall cost of developing software and increasing developer productivity, especially for enterprise applications.

Today running a business requires automation, and computers are a fact of life in every industry. But the same IT departments that are charged with building and running a company's automation systems are consistently scrutinized to determine where costs can be saved. This occurs because companies still don't have a good way to measure the value of their investments in hardware, software and the people who develop, maintain and manage their systems.

Among the costs facing today's IT departments, labor remains the largest by far. For many reasons, hardware and software prices have been dropping, but labor prices remain relatively high. Even outsourcing, while it has the potential to dramatically cut the cost of hiring and retaining permanent IT staff, does not address the fundamental issue of productivity—the people may cost less, but it still takes them the same amount of time (or perhaps more time) to achieve the same results.

The software industry needs standards for these reasons, not to prevent vendor lock-in. Indeed, the software industry needs to become more productive and more valuable to business and commerce. In the face of dramatically dropping prices of hardware over the past decade, the cost equations for software development have been fairly static, and will remain so until pervasive, widely adopted standards are achieved.

What's needed is a common way of programming to any language or operating system, and a common way of communicating between any two or more programs. Heterogeneous hardware, operating-system and software environments are the main

problems that businesses have, and will continue to have into the foreseeable future.

To imagine that companies of any significant size will ever become truly single-vendor environments is not only unrealistic, it supports the fantasies of the industry's dominant players, who continue to vie for that honor under the assumption that one day it might happen.

In other words, vendors naturally seek to preserve their market share, and to take market share from their competitors. Typically the market-share game comes down to a fight over the percentage of a customer's business each vendor has. The vendor preoccupation with competing for market share and an increasing percentage of the customer's business takes focus off the real issue, which is how to help customers get more for their money by ensuring that meaningful standards are widely adopted.

## INCREASED COMPETITION

In addition to the obvious advantage of increased productivity and reduced training necessary to develop and maintain applications achieved through effective standardization, there is a less-obvious advantage, which is increased real competition. Instead of a small number of large vendors spending time and resources fighting with each other over percentages of a customer's business, vendors should

be looking for their specialization and perfecting it.

It's as crazy to imagine that any single software system will become dominant as it is to assume that any single device will fill everyone's computing requirements.

One could imagine, I suppose, a world in which everyone got their software from a single supplier, much as we get our electric, telephone or cable service from a regulated monopoly. But that makes sense only when what's being offered is a single type of product or service.

Computers come in many shapes and sizes and are used for many different types of applications. It seems impossible that the same computer system that powers a car would manage a shared corporate database. And so it seems equally impossible that the same software that could run an elevator would run a bank.

In particular, there's a broad difference between single-user, dedicated computing systems and shared, multiuser computer systems. When a car or an elevator needs something from the computer, it needs it in real time, and it needs a very specific function to be performed.

On the other hand, each business needs something a bit different with respect to its operational systems. The layout of a warehouse, a shipping hub arrangement, or the speed of processing a loan can all be points of com-

petition in various industries, and as such, typically require custom-developed or specialized computing systems that implement those business processes.

One could speculate that the entire automation of a business's operational systems could and should be carried out by a single vendor, and therefore standards aren't necessary. But, this directly contradicts the type of general market forces that make computing systems affordable.

If a company were to run completely proprietary hardware and software, it would not gain the benefit of the mass-produced or general market product, whose research, development and maintenance is effectively amortized across the numbers of customers. R&D costs are the single biggest expense in software development, for IT shops as well as for software makers. It is in the interests of both, and especially of the end customer, either to cut these costs or to make the greatest use of the investment.

The software industry may now be in a place where we can more effectively look toward proven methods of mass production for the solution to our quandary. Until today, the software industry was too immature, and despite several attempts, the answer had not presented itself. Web services do offer the potential for solving this problem, but the contradiction or paradox is that if they do, they will also change the industry as we know it, and no one, at least not those companies in a leadership position, likes change of that sort. ■

*Eric Newcomer is CTO of Iona Technologies PLC.*

Eric Newcomer



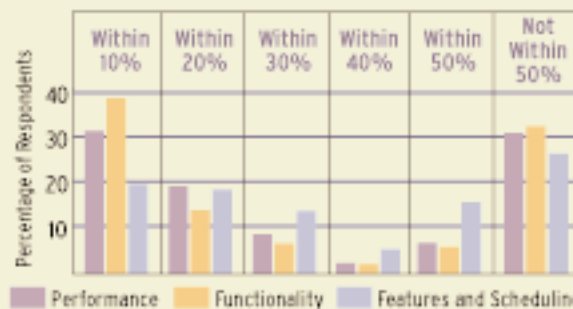
Guest View

## Do Final UML 2.0 Designs Meet Predesign Expectations?

Most embedded developers using UML 2.0-based tools are finding that projects come close to their predesign expectations with regard to functionality and performance, but fall short in terms of features and delivery time. That's according to a 2003 study by industry research consultancy Embedded Market Forecasters, based in Framingham, Mass.

Of the 954 respondents, 53 percent said their final application delivered functionality that was within 20 percent of the expected level, while 31 percent said model-based development projects delivered less than half of the performance expected.

Interestingly, modeling missed the mark when it came to application features and project scheduling. Less than 20 percent said the tools delivered features within 10 percent of expected schedules, while about 42 percent said the tools delivered half or less than half the features or took twice as long as expected.



Source: Embedded Market Forecasters, 2003 www.embedded-forecast.com

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# The Decline and Fall of the U.S.

In mid-May, I attended the World Business Forum in New York City, where I listened to CEOs Jack Welch (formerly of General Electric), Lou Gerstner (formerly of IBM) and Anne Mulcahy (currently of Xerox), in addition to business gurus Jeremy Siegel and Michael Porter. They spoke about many topics, but a recurring theme was the role of outsourcing and offshoring in the current economy. There was a remarkable unanimity of opinion on the topic and also one very scary forecast.

The overall position was articulated by Welch, who was not fired up in the brawler style he made famous until the topic of offshoring came up. Then he became emphatic: "The view that offshoring is bad is one of the most ridiculous ideas I have ever heard. Do you remember in 1991 when [Ross Perot] talked about the great 'sucking sound of jobs being lost to Mexico,' because of the NAFTA treaty? What actually happened? For the next eight years, the U.S. underwent the greatest economic expansion in its history. Job protection and complaining about offshoring only ever come up when the economy is not doing well. As soon as things pick up, no one talks about it anymore."

Continued Welch: "The most com-

mon estimates are that the U.S. will lose a quarter million jobs to offshoring this year. In April alone, the U.S. economy gained 288,000 jobs. So how much is offshoring hurting us? Not at all. It's helping." A report released in May by Forrester Research projects that 3.4 million jobs will be offshored during the next 11 years, so Welch's numbers look about right.

Gerstner pointed out that due to the offshoring trend, unskilled jobs in the U.S. or in most economies no longer exist, and that this trend will continue, while Mulcahy pointed out that all major companies are now offshoring and outsourcing, and that the model of the vertically integrated company (one that designs, manufactures, sells and distributes its own products) that was popular several decades ago is gone forever. It no longer makes sense to do things internally that can be done better and cheaper by other companies or in other countries.

Porter, the guru of strategy and the person who invented the concept of "value chain," pointed out that the more a company outsources, the less competitive advantage it enjoys. It's not a subtle

point, but it's an important one: The more services you outsource, the more your company looks like others.

Moreover, as Porter explained, suppose you're in semiconductors and you outsource fabrication. When you do this, you will lose the human capital you have around fabrication. So, when you go to design a new chip, who will correct your design and point out that it will cost twice as much to fabricate?

Possibly the foundry that does the fab work for you, but its interest will never align with yours, and the crossover intelligence you enjoyed by having both design and fab talent in house will be gone forever. In this sense, you will be losing a competitive advantage by outsourcing a critical function.

The most ominous presentation of the conference was Siegel's explanation of a key demographic trend. Siegel, professor of finance at the Wharton School of the University of Pennsylvania, pointed out that in 1955, the average U.S. worker retired 1.6 years before his death. Today, with the advent of earlier retirement and longer life expectancy, retirements average 14.4 years (retire at 62, die at 76).

## Integration Watch



Andrew Binstock

In 1950, there were more than six workers in the marketplace for every retiree drawing benefits. In 2000, it was five workers; by 2025, it will be down to three. Clearly, the trend cannot continue. And of the two trends, life expectancy is the only one that will inexorably rise. Even at today's 14-year gap, which might not be tenable in the long term, by 2050, we will certainly need to work past the age of 70.

What factors could help to avoid working so long? The first is increased productivity. But according to Siegel, even if productivity increases significantly, the impact will be slight, possibly shaving a year or two off the retirement age. Most likely what will need to happen, opines Siegel, is that a new constituency will have to emerge to produce our goods (offshoring) and buy our assets. That constituency consists of developing countries, whose populations are much younger.

Consequently, Siegel predicts that offshoring will accelerate and our trade deficits with the developing world will increase dramatically. The end result, he feels, is that by 2050, the U.S. will no longer be the center of economic activity worldwide. That center will consist of China and India, with the then-older U.S. occupying the same declining role in the world economy as Europe does today. ■

Andrew Binstock is the principal analyst at Pacific Data Works LLC.

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# Microsoft's Tablet Works Right Away

What's so confounding about the Tablet PC is that Microsoft didn't require three generations to get it right. No one expects Microsoft to create a vastly usable, powerful and essentially bug-free product on the first try. But, surprisingly, the company did. So why isn't it being accepted by the market?

If the Tablet PC were more typical of an early-version Microsoft product, polished but feature-poor, its slog toward acceptance would seem natural. Typically, Microsoft products trickle into the workplace, slowly gain functionality, and achieve moderate market share while waiting for the competition to stumble (Lotus, WordPerfect, Palm, etc.). Redmond is bad at generating demand: What's the last Microsoft campaign that actually had some amount of buzz, Windows 95?

The latest indignity suffered by the Tablet PC is that the very useful Lonestar upgrade (officially, Windows XP Professional for the Tablet PC 2005), a small, user-installable enhancement that improves the quality and editability of handwriting recognition, has been pushed back to the fall. Why? Because it has become entangled with the much more ambitious Windows XP Service Pack 2, which has itself been delayed.

I'm willing to go out on a limb and say that WinXP SP2 wasn't pushed back for all those months for the Tablet team to fine-tune recognition of the Euro symbol.

As a user, what attracts me to the first generation of Tablet PCs is not the quality of software for writing and note-taking, but the low profile of the devices themselves. I'm handwriting this column in a rural coffee shop and feel considerably less conspicuous than I would feel clicking away at a keyboard.

Similarly, a Tablet is a superior format for business meetings; it may not be as invisible as a legal pad, but once a certain amount of curiosity is appeased, it's much more conducive than a laptop for note-taking while maintaining eye contact with a client. Microsoft's OneNote is the showcase note-taking application, but I'm at least as impressed with Mind Jet's Mind Manager, which emphasizes graphical "mind maps," an associative note-taking form perfectly suited for pen input.

As a developer, what attracts me to the Tablet PC is the SDK.

The Tablet PC SDK is a dramatic validation of the .NET Framework strategy. Ever since Java 1.0, there's been a debate

on the balance between portable and easier-to-evolve managed libraries and more complex, but inarguably speedier, native libraries.

The .NET Framework strategy, in my developer-centric worldview, is the horse that pulls the Longhorn cart: virtually comprehensive OS-level access exposed via managed APIs, some of which have thick layers of managed code between the third-party developer and the underlying capability (for instance, the encryption and reflection libraries) and others where the fast-performing native code is just under the surface. The Tablet PC SDK is the latter.

If you've ever used a digitizing pen with a traditional application such as a drawing program, you've undoubtedly experienced "lags and jags," data collection lagging behind your fast-moving pen and then snapping to the new position as mouse movement events are consolidated. This experience is virtually unknown with the Tablet PC: Pen input is gathered in a high-priority OS-level thread with sampling rate and precision higher than that used for mouse movements, and the construction of "Ink" as a

vector-based datatype is done natively.

Despite the closeness to this very low-level generation of data, the Tablet SDK exposes the data with a very clean object-oriented model: Ink objects, collected into Strokes collections, recognized as text with a Recognizer, etc.

The result is the best "bang for the buck" that I've ever seen in an SDK: a powerful new OS capability that is programmable in a manner of minutes. That's what I want in a programming model.

The Tablet PC SDK is a milestone because it's the first such capability that is not part of the .NET Framework core: A high-performance windowing toolkit is a fine thing, but one suspects that the optimization resources associated with Windows Forms is greater than the gross national product of many small countries. The challenge of Longhorn will be to repeat the Tablet SDK's marriage of capability and ease time and time again. If it can accomplish that, it should be a smashing success as a development platform.

Rather than the appealing beta name Lonestar, the official name of the forthcoming release is the risible Windows XP Tablet PC Edition 2005. Oh well, maybe Microsoft will get the name right on the third try. That would fit the pattern. ■

*Larry O'Brien is an independent technology consultant and analyst, and the founding editor of Software Development Magazine.*

Windows & .NET Watch



Larry O'Brien

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# Good Tech Support Yields Better Software

I was out of town last week, and was forced to get e-mail through a dial-up connection. My provider is SBC—the biggest DSL provider in California (this fact will be relevant in a moment).

SBC used to defeat spammer-friendly “open relays” by not allowing you to send e-mail unless your IP address was on its subnet (which was the case only when I was in my office). SBC has now switched over to password-based SMTP authentication, which makes me happy because I can send e-mail from anywhere.

I used to use (notice the past tense) Qualcomm’s Eudora as an e-mail client. I’ve used Eudora for years and like it. Unfortunately, Eudora’s config system is designed around the thought process of an individual who doesn’t think like I do. I needed to set up the program so that I could pick up my e-mail from a spam-blocker service, which acts as a POP3 proxy, while continuing to be able to send e-mail via SBC’s SMTP server.

To make matters even more interesting, the SBC e-mail address is in the sbcglobal.net domain, but SBC’s SMTP server is in the yahoo.com domain. I had no problem making everything work from my office, where I was on an SBC subnet and never needed to use pass-

words, but it did not work properly from a hotel that used a different ISP.

After trying, without success, to make Eudora work from the hotel room, I e-mailed tech support three times over several days, but they did nothing but quote a Web-page FAQ to me. I called Eudora tech support, which is not a toll-free number, was put on hold for a half-hour, and was then cut off without ever being allowed to talk to a human.

At that point, I gave up. I’m now using Microsoft’s Outlook, because it was trivial to set it up to work properly.

Why am I regaling you with my sad story? So I can talk about the importance of tech support in supporting the software engineering process. An organization that looks at tech support as a necessary evil is throwing away essential feedback that it needs to improve and refine (read “sell more copies of”) their product.

Qualcomm is effectively saying that it would rather lose SBC DSL customers than understand, much less fix, a legitimate problem that at least one of those users has.

Maybe it’s just a UI problem, maybe

it’s deeper, but the bottom line is that I couldn’t get the product to work. Worse, details about the difficulties I was having will never make it to the engineers who need to address those difficulties because tech support placed barriers in the way.

If the problem had been escalated to a software developer (not a “support engineer”), that developer could make

sure that the problem got fixed. As it is, my problem has disappeared down a black hole and will probably never be addressed. For the company’s CEO, the reason why sales are diminishing will remain an eternal mystery.

Support organizations—if implemented properly—feed information back into the design and development process at three levels:

- Out and out bugs feed back into the implementation level. The engineering team needs to dig out the code and fix it. If this fix requires a significant refactor, they might push it back up to the design level.

- Problems of the “I know it does it, but it’s too hard” or “I can’t figure out how to do X” variety are design-level problems. The design team needs to rethink how

they implemented a use case so that the program helps, rather than hinders, the users as they work through the required activities. If there was no use case, then there needs to be one, and the problem gets pushed back to the analysis level.

- Problems of the “I need to do this, but the program won’t handle it” variety are analysis-level problems. The design team needs to develop a new use case and migrate it down through design to implementation.

Nobody will use your product if it doesn’t solve real problems for real users (including those annoying rubes calling tech support). What better way to find out what to do than have your users tell you?

Tech support can provide you with exactly the information that you need to improve your design and implementation, but that information is of no use if you throw it away. If your tech support process doesn’t capture the real problems that your users are trying to solve, and then feed back those problems into your development organization, you’ll never have a chance of keeping up with the competition.

The people who call into tech support are subject-matter experts. If you treat them as an annoyance, they’ll go elsewhere. Is that what you want? ■

*Allen Holub is a leading architect, consultant and instructor in C/C++, Java and OO Design. Reach him at [www.holub.com](http://www.holub.com).*

## Java Watch



Allen Holub



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# A Cult of Anonymity

There has been somewhat of a tempest in a teapot recently on the Linux-focused news site, slashdot.org. One writer claims he has caught several JBoss employees—even CEO Marc Fleury—in the act of posting anonymous messages on TheServerSide.com and other developer community Web sites.

The writer, whose “handle” of Scubabear, ironically, helps to keep him anonymous, claims JBoss representatives have acted unethically by surreptitiously praising JBoss and knocking its competition on these sites. Scubabear—whose identity might be known to regulars on slashdot but to the rest of us he’s as masked as Batman—writes that new TheServerSide.com features for tracking users by their IP address helped reveal the identities of these JBoss interlopers.

Scubabear writes: “The evidence shows how a corporation can manipulate popular opinion via anonymous personalities, that open source companies can be just as ruthless as closed source when it comes to marketing their wares, and that you should never forget that your cookies and IP address can and will be tracked online.”

Here’s what is so very wrong with the points Scubabear is trying to make. I’m assuming his first point is about trust, with the point being that he wouldn’t trust a company employee to tell him the truth about a company, but he might be more inclined to trust a peer on a developer site to tell the truth. Well, this is one of the acknowledged weaknesses of the Internet—it’s often impossible to really know the source of a given piece of information.

If I were a developer considering using any technology, be it a Java application server, or a requirements tool, or a .NET component suite, I might supplement my own research with some informal inquiries on a developer Web site about the product, but I certainly wouldn’t base my purchasing decisions on those postings—almost

all of which are anonymous.

Here’s a scary posting on slashdot, from frenetic3: “It sucks because unlike marketing efforts and vendors’ sales messages, which everyone has learned to always take with a grain of salt, I’m inclined to believe, often instantly and completely, a slashdot posting endorsing product X, because the poster seems unaffiliated and genuine and doesn’t really have anything to gain from endorsing it. In fact, it’s very dangerous, because my trust can be easily manipulated this way; I usually don’t have time to bother to verify the source of a given posting.”

He doesn’t bother to verify the source of a given posting? My question is, why would anyone trust any posting that is unidentified? The sad truth of the Internet is that people can hide behind their anonymity to put forth any version of reality they want, and it’s getting harder for any of us to know what is fact.

I don’t blame JBoss for anonymous postings to developer sites. I have come to expect businesses to do whatever they think they have to do to drive revenues. After all, Fleury has said the company had raised another round of venture funding and planned to use some of the money to step up marketing efforts. Judging by the traction the company has gained over the past couple of years, I’d say its message is resounding with people.

The bigger issue, of course, is how does a consumer learn the truth?

## Industry Watch



David Rubinstein

## TMC SEVERS TIES TO JBOSS

In light of the discovery of what it claims were anonymous postings to its Web site TheServerSide.com by Marc Fleury and other JBoss Inc. employees, The Middleware Company (TMC) said it is ending its business relationship with JBoss.

A TMC spokesperson who did not wish to be identified said the company will end the JBoss sponsorship of TheServerSide Symposium and will no longer accept advertising from JBoss. However, discussion by visitors to the Web site of JBoss and its products will be allowed to continue. Fleury did not return a call seeking comment.

The spokesperson said the company tried to resolve the matter with JBoss but added, “The instability and unprofessional conduct from JBoss Inc. CEO Marc Fleury eroded the company’s optimism for reaching resolution.” —David Rubinstein

Whether it’s a product’s capabilities, or a candidate’s voting record, or a company’s take on the market, how can we really learn what is true? Information can be skewered and skewed to the point where it becomes unreliable. This is not good for anyone. I would like to think that businesses and politicians would voluntarily do their part to ensure the information that is being sent out is accurate and complete. I have come to know better.

Instead, I blame the people who blindly believe. Here’s a slashdot posting from Angst Badger, responding to frenetic3’s line about believing, instantly and completely, slashdot postings:

“I spent a lot of time thinking about this sentence, carefully formulating a well-reasoned, thoughtful response to it. Then I went back over it, polishing it and making it more concise, pruning away every superfluous word that might obscure the essential message I was trying to get across. It came down to one word: Boob.”

The last Scubabear comment, to the effect of “we know where you live,” is intended, I presume, to mean that anonymity is on the way out, that there is no more hiding behind fake IDs and user names. As a journalist, I’m all for openness. We have a right to know where our information is coming from, whether it’s factual and unbiased, or fictional and slanted. We also need to exercise common sense, and throw out or discount information that cannot be verified.

So to all the user-name anonymous posters out there, I say, stand up, or shut up. My name is right here. Who are you? ■

David Rubinstein is editor of SD Times.

## BUSINESS BRIEFS

Erich Gerber has taken over as chief executive officer at German modeling software company **Interactive Objects Software GmbH**, replacing founder Richard Hubert. The company is now wholly owned by two investment companies—**3i** and **Viewpoint Capital Partners**—as the company moves to broaden training and professional services. Gerber has more than 20 years’ experience in the software industry, including stops at BEA and the defunct WebGain . . . Component vendor **Infragistics Inc.** is promoting a video in which **Gartner Inc.** analyst Mark Driver and Infragistics CEO Dean Guida discuss the business value of standardizing on a single tool set for building the presentation layer of applications.

**EARNINGS:** **Novell Inc.** reported revenues of US\$294 million for the second fiscal quarter ended April 30, an increase from the \$276 million reported for the same quarter in 2003. The company showed a net loss to common shareholders

of 4 cents per share, compared with a loss of 8 cents per share a year earlier. On a non-GAAP basis, adjusted net income for the second fiscal quarter of 2004 was \$14 million, or 3 cents per share, which excludes the effect of the preferred stock deemed dividend of \$26 million from an investment by **IBM Corp.** in Novell . . . **MKS Inc.** reported revenues of US\$32 million for the fiscal year ended April 30, up from the \$31.9 million reported for fiscal 2003. For the fourth quarter, MKS reported revenue of \$9.2 million, an improvement of \$1.9 million over the third quarter but down 2 percent from a year ago. The company posted a net loss of \$1.4 million for the year, or 3 cents per share, compared with a loss of \$1.2 million, or 3 cents per share, for 2003. MKS reported its enterprise software configuration management (SCM) business revenues increased to a record \$6.8 million for the quarter, representing a 34 percent increase over SCM revenues of \$5.1 million in the third quarter of fiscal 2004. ■

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**VSLive New York** July 26-29

New York  
FAWCETTE TECHNICAL PUBLICATIONS INC.  
[www.ftponline.com/conferences/vslive/2004/ny](http://www.ftponline.com/conferences/vslive/2004/ny)

**Open Source Convention** July 26-30

Portland, Ore.  
O'REILLY MEDIA INC.  
[conferences.oreillynet.com/os2004](http://conferences.oreillynet.com/os2004)

**SCO Forum** Aug. 1-3

Las Vegas  
THE SCO GROUP INC.  
[www.sco.com/2004forum](http://www.sco.com/2004forum)

**LinuxWorld Conference & Expo** Aug. 2-5

San Francisco  
IDG WORLD EXPO CORP.  
[www.linuxworldexpo.com](http://www.linuxworldexpo.com)

**SIGGRAPH** Aug. 8-12

Los Angeles  
ACM SIGGRAPH  
[www.siggraph.org/s2004](http://www.siggraph.org/s2004)

**HP World 2004 Conference & Expo** Aug. 16-20

Chicago  
INTEREX  
[www.hpworld.com](http://www.hpworld.com)

**Embedded Software Development Conference** Aug. 17-19

San Jose  
BZ MEDIA LLC  
[www.esdevcon.com](http://www.esdevcon.com)

For a more complete calendar of U.S. software development events, see [www.bzmedia.com/calendar](http://www.bzmedia.com/calendar). Information is subject to change. Send news about upcoming events to [events@bzmedia.com](mailto:events@bzmedia.com).

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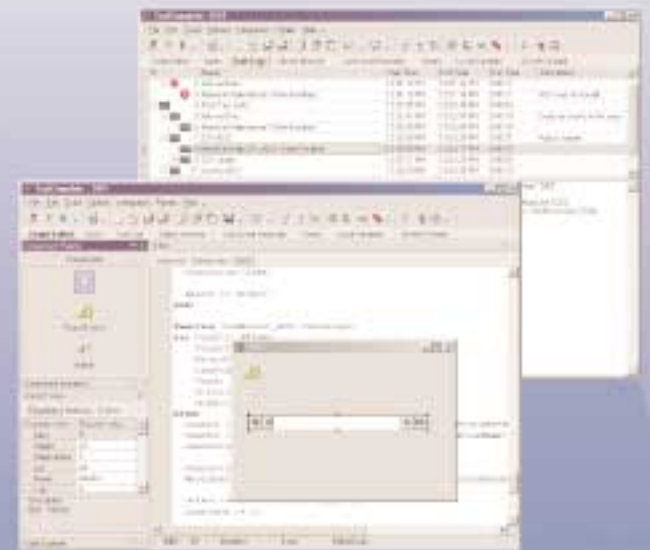
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