



JavaOne™ TODAY

May 16–19, 2006

The Moscone Center

San Francisco

INSIDE THIS ISSUE:

- 2 TODAY's Question
- 3 Java University
- 3 Daily Prompt
- 4 TODAY's Crossword Puzzle
- 5 TODAY's Sudoku Puzzle
- 5 Java Champion
- 6 Code Talk
- 7 Duke's Choice Awards
- 9 NetBeans IDE
- 10 Conference UPDATES
- 14 Puzzle Answers

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Welcome to the 2006 JavaOneSM Conference

The Power of Java™ Technology is YOU!

Jonathan Schwartz
May 2006

Every year I'm amazed at how fast Java™ technology continues to evolve and expand into areas that, quite frankly, we would never have imagined. Just consider this: Today there are more than 3.25 billion Java technology-powered devices around the world. That's more than 800 million desktops, more than 1 billion mobile phones and other handheld devices, and more than 1.5 billion smart cards.

What is it about this technology that makes it able to grow and mature while still being at the core of innovation? In large part, I believe the answer is you—the more than 5 million developers using Java each and every day. You are part of the world's largest and most active community. Through the Java Community ProcessSM program, anyone can offer ideas, recommend changes, and help shape the future of the Java platform.



This week, Moscone Center shows its colors with the Power of Java.

In fact, it's your innovations and this community that have helped make the Java brand one of the most well-known and respected in the industry. Java technology is recognized by an amazing 86 percent of tech-savvy consumers who base their purchase decisions on

whether a product runs Java or not. Java technology truly has become the key ingredient of the digital experience for hundreds of millions of people across the planet.

The 2006 JavaOneSM conference celebrates

See WELCOME, page 14

The Enduring Power of Java™ Technology

Christine M. Dorffi
May 2006

Now that the Olympics are over, the signs that read "Passion Lives Here" could well be transported from Torino, Italy, to San Francisco's Moscone Center. Thousands of passionate Java™ technology advocates, developers, and experts from across the globe will descend upon San Francisco, May 16 to 19, for the 2006 JavaOneSM conference. This annual exchange of all things about Java technology will include hundreds of expert-led technical sessions, real-world tips and examples, Birds-of-a-Feather sessions, Hands-on Labs, previews and demonstrations of technical advances, and exciting evening events with industry leaders.

This year's theme, "The Power of Java," celebrates Java technology's 11th year as a platform and programming language that has proven its worth in the marketplace. Not only does it work across platforms, but it also ably

scales from the smallest micro-edition portable device to the most mission-critical enterprise behemoth.

Many from the industry will be on hand to celebrate Java technology's enduring power during the four-day affair. Sun's Conference cosponsors include: Platinum—BEA Systems, Inc., IBM, and Oracle; Gold—Justsystems Inc., Nokia, SAP, and Terracotta Inc.; Silver—Adobe Systems, BenQ-Siemens, Quest Software Inc., SavaJe Technologies, and Sprint. In addition, more than 70 companies will be exhibiting on the JavaOneSM Pavilion floor.

Opportunities for Glory

The JavaOne conference offers developers several opportunities to showcase real-world applications that use Java technology. The Duke's Choice Awards (a.k.a. the Dukies), for example, gives Java technology developers the chance to confound James Gosling, Scott McNealy, and the Java technology leadership team: They have to choose the winning applications that best exemplify extreme innovation using the Java platform. Last year, the winners

came from around the world—among them, entries from São Paulo, Brazil; Fukuoka, Japan; and Cary, N.C. (For more information, see <http://java.com/en/dukeszone/dukeschoice.jsp>).

The now traditional T-shirt Hurling Contest also gives participants a unique opportunity to demonstrate the power of Java technology and the chance to win a highly coveted Java jacket, as well as cash. Each year, contest participants devise inventive, non-lethal ways to fling special T-shirts designed by James Gosling into the audience. Past devices have included a trebuchet, a "master blaster," and slingshots. Yet another tradition to blame on Java technology father James Gosling. (For more information, see <https://tshc.dev.java.net/rules>.)

Planning Your Conference

The sheer number of sessions, activities, and choices can feel overwhelming to attendees. This year, you have a handy assistant: the JavaOne Conference Schedule Builder. It will help you navigate and make choices among the sessions, whether your focus is desktop,

See POWER, page 8

TODAY's Question: If You Could Wish for a NetBeans Plug-in, What Would It Be?



"I would like to do line-by-line code coverage and verification of code execution. It would be great to have a plug-in for Cobertura."

Adam Myatt
GE Global Research
Albany, N.Y



"I need a plug-in to assist in using XMLBeans for object-XML mapping. It would be nice to have a schema editor for XML too."

Peter Belpin
McLeod USA
Houston



"We need more web services server technologies and options."

Teodoro Pfeiffer
McLeod USA
Houston



"Very easy. It would be VI. It's an ancient editor system we used to use to telnet. It's hard to learn. And it's hard to unlearn. I'd love a NetBeans editor for VI."

Klaasjan Tukker
President, NL JUG
www.nljug.org

Win Prizes for Submitting Session Evaluations

Here's your chance to win a \$75 gift certificate redeemable at the Retail Store at the JavaOne™ conference or a \$75 gift certificate to the Java™ Wear and Books online catalog store. Be sure to turn in your session evaluation forms daily for entry into the drawing. We announce five winners each day of the Conference.

The more evaluations you turn in, the greater your odds of winning!

Do You Have a Friend?

If you participated in our Refer a Friend Program and your friend(s) registered using your Registration I.D. number, you can claim your iPod nano music player (if you referred three or more friends who registered) or T-shirt (if you referred one or two friends who registered) at the Retail Store located in the North Concourse.

Redemption Center hours

Tuesday, May 16, 10 a.m. to 2 p.m.

Wednesday, May 17, 10 a.m. to 2 p.m.

Thursday, May 18, 10 a.m. to 2 p.m.

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<daily prompt/> Day 1: Welcome! And Read This Now!

Bob Eckstein
May 2006

As always, on behalf of Sun, welcome—or welcome back—to this year's JavaOneSM conference.

Okay, now for the important stuff. The organizers of the 2006 JavaOne conference have asked me to pass on some crucial information. Things will be a little different at this JavaOne than in years past. In an attempt to cut down on the “overstuffing” of rooms for popular talks, and the sore feet that follows from those who were required to stand in the back, we've borrowed a model from some other conferences that we've seen work.

If you preregistered for the conference online, then you know what I'm talking about. That is, you used the online Schedule Builder to “reserve seats” for sessions. If you didn't, I really encourage you to find one of several dozen terminals scattered throughout the Moscone Center and start reserving sessions slots as quickly as possible.

Here's why: individuals who are preregistered for a specific session will be allowed in ahead of time, like normal, and will get the

best seats. Individuals who are not preregistered will still be allowed in *if there are seats remaining*, and then only shortly before the talk begins. Put succinctly, they get the “stand-by seats.”

So, at this point, you're probably wondering what happens if there are several hundred people in the hall, unable to get into a session because it's packed denser than the next “Star Wars” premiere. Don't worry. The reservation system lets the conference organizers keep track of which sessions are full, and the organizers will be watching. If they need to repeat the session, they'll try to arrange it with the speaker.

At this point, I've noticed one or more things typically occur:

1. Before the speaker can finish saying, “Wow, my session was that popular!?” they're ambushed by a publisher racing to sign a book deal. Have no fear—we'll still get through to them.
2. The speaker's hopes of flying home right after their first presentation and taking the rest of the week off to recuperate are hopelessly thwarted.
3. The speaker is relieved because it gives them a chance to debug that demo code that caused an embarrassing exception during their first presentation.



up to speed on the buzzword of the year. But like I said earlier, be sure to reserve seats early. Trust me, they'll be the first to fill up.

By the way, I hear that Joshua Bloch and our friends at Addison Wesley will be releasing a second edition of *Effective Java*. If you don't have that book, get a copy. No, I'm not moonlighting as a marketer for Addison Wesley (Hey, I used to work for O'Reilly Media, a worthy competitor!) The book is just that good, and if you're a serious Java programmer, you already know how invaluable Josh's tips are. On that note, be sure not to miss those popular Java Puzzlers that Josh will be presenting at the conference. That's also some good content to floor your colleagues with.

Finally, we all know that there are exciting things that are announced in the keynote addresses, and this year will not be any different. So, without giving anything away, here are a few things that you should be on the lookout for in this year's keynotes:

- Graham Hamilton seems to have a passing interest in one of Mars's moons.
- James Gosling loves to push his phones to the limit.
- And, of course, what would JavaOne be without our friend Scott McNealy and his trademark witticisms?

So, with that, it's off to the sessions. Enjoy Tuesday's show, and I'll see you on the conference floor! ■

Java UniversitySM Program Opens 2006 JavaOneSM Conference

Dana Nourie
May 2006

This year, the JavaOneSM conference opened with the Java UniversitySM program, and it is more exciting than ever. Delivered by Sun certified instructors, experts in Java technology, these full one-day courses are designed for developers seeking down-and-dirty, in-depth knowledge.

Created for the intermediate to advanced developer, the courses are packed with useful information on JavaTM Platform, Enterprise Edition (Java EE) technologies and architecture. These are not lightweight programs, but all-day courses outlined to cover the nitty-gritty details that developers need for their everyday work.

Attendees chose from one of the following Java technology courses:

- Implementing Business Logic Using Enterprise JavaBeansTM Architecture for the Java EE Platform
- How Java EE Patterns Help in Architecting and Designing Robust Java EE Applications
- Using JAX-RPC to Enable Java EE Platform Applications to Interoperate With Applications That Are Not Java Technology-Based in a Secure Web Services Framework
- Exploring the Struts Framework and How it Supports Web Component Development

In addition, the free bonus course, Exploring AJAX & JavaServerTM Faces Technology, was added exclusively for Java University attendees this year.

Each course requires some knowledge of Java programming, and at least a fundamental understanding of Java EE technologies is helpful. The courses start out by thoroughly defining specific technologies, functions of components, and the lifecycles of various technologies. The courses then go into detail about how those technologies are applied to real world scenarios, down to the details of coding requirements and recommendations.

I went to the “Exploring the Struts Framework and How it Supports Web Component Development” course, taught by Evan Troyka, who has been teaching Java programming since 1997. The room had close to 140 attendees, and the tables accommodated the many laptops that people brought with them. With each course, attendees received a thick booklet covering the course content, diagrams, and example code. At the front of the room, we viewed the slides on two huge screens.



Instructor Alan Petersen during a Java University course, “Using JAX-RPC to Enable Java EE Platform Applications to Interoperate with Applications That Are Not Java Technology-Based in a Secure Web Services Framework”

Evan began by covering what we would learn throughout the day, and explained that attendees would do follow-up lab work with special passwords the following week. This particular course covered:

- Servlet API
- JavaServer PagesTM (JSPTM) technology
- Java EE concepts with regard to web components
- Model-View-Controller architecture (MVC)
- Developing View Components
- Developing Controlling Components
- Simplifying Web Components using Apache Struts

The course began with HTTP protocol, and gave examples of GET and POST methods as well as Request and Response format. He then went on to give an overview of the web component model and specific web components, such as servlets and JSP pages, and how they differ and what they have in common. He stressed the importance of not filling JSP pages with code you would normally put in a servlet. Otherwise, presentation code and business logic becomes increasingly difficult to manage and troubleshoot.

In addition, he went over the pros and cons of using the Java EE platform over, say, a CGI model. The bottom line is performance because of the beauty of threading. This, however, can bring up concurrency issues that you wouldn't have with CGI. Even so, the Java platform suffers less processor load, and CGI systems are far more likely to crash. The other advantages of using the Java EE platform over CGI are the abundant Java APIs, platform independence, and container management.

See JAVA UNIVERSITY, page 4

JAVA UNIVERSITY

Continued from page 3

Evan gave code examples for servlets and a JSP page, and compared a bit of code written in ASP, PHP, and JSP:

ASP

```
<% FOR I = 0 TO 10 %>
<TR><TD><%= I %></TD><TD><%= (I * I) %></TD></TR>
<% NEXT %>
```

PHP

```
<? for ( $i=0; $i<10; $i++ ) { ?>
<TR><TD><? echo $i ?></TD><TD><? echo ($i * $i) ?></TD></TR>
<? } ?>
```

JSP

```
<% for ( int i=0; i<10; i++ ) { %>
```

```
<TR><TD><%= i %></TD><TD><%= (i * i) %></TD></TR>
<% } %>
```

He went on to explain the advantages of JSP pages, such as that JSP pages have all the advantages that servlets do, can contain non-Java elements that are powered by Java components such as custom tags, standard tags, and expression language (EL), and can be developed without Java programming language skills.

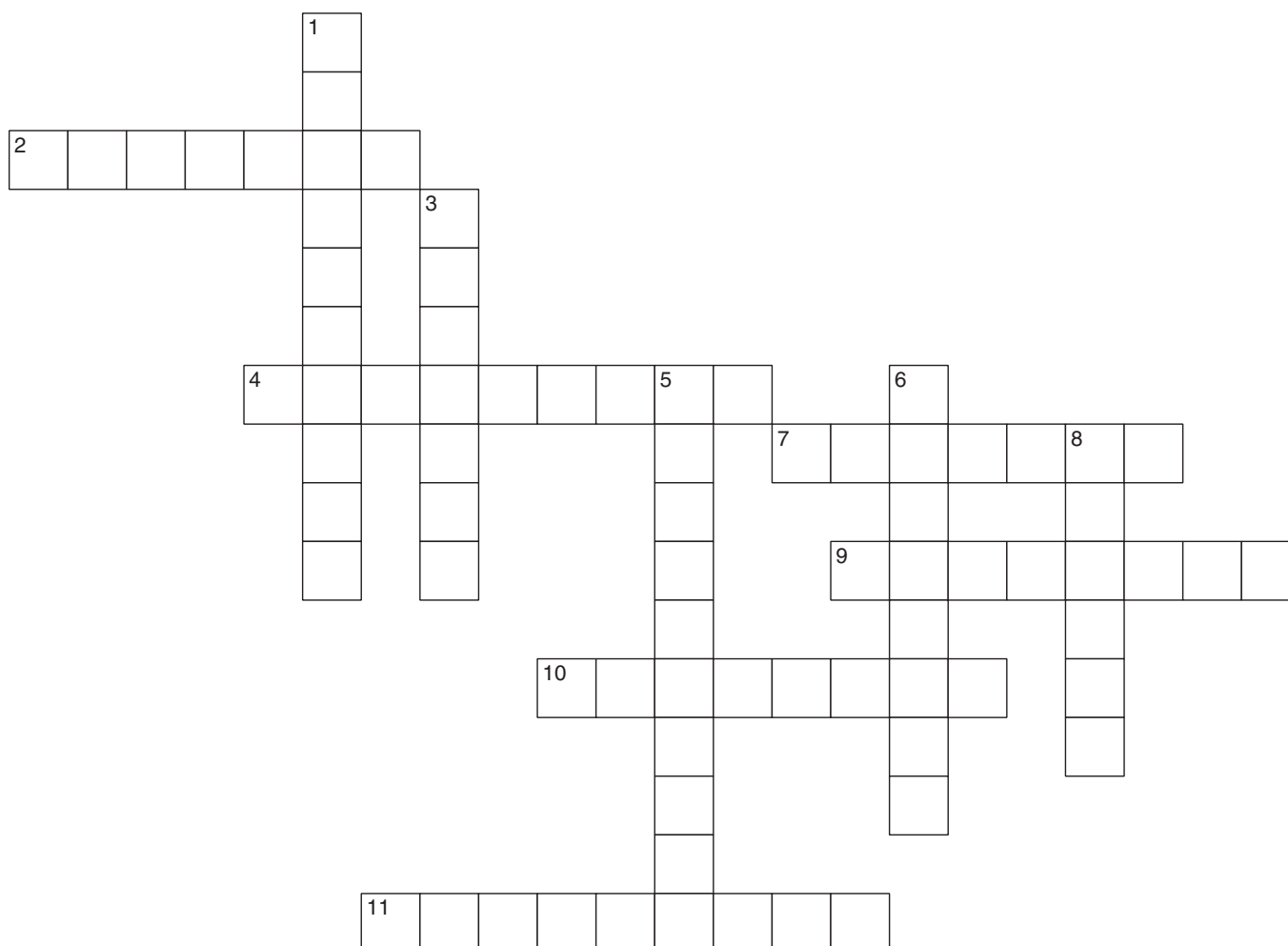
In addition, he showed diagrams of the Java EE platform, and how all the web components worked together with the HTTP protocol. The rest of the course got down to the details of each web component, and why and when you use each of them. To show how all the components come together, a soccer league case study was detailed, starting with the logical client view, details of the HTML and JSP pages, structure of the web application, and deployment.

The last half of the day detailed Struts, what you get with the software, implementation details, and the important ActionServlet, and methods you need to know most. Troyka explained lines of code for the soccer league case study and how it all tied together, and areas of simplification.

The course was detailed, full of explanation and code samples, so developers could walk away with a thorough understanding of the concepts they would need to get working.

For more information on the Java University program, visit <http://java.sun.com/javaone/sf/javauniversity.jsp>. ■

TODAY'S Crossword Puzzle



Across

02. Java SE 6 code name
04. The "not good for sushi" open source application server
07. Struts' new partner
09. A waits for B, while B waits for A
10. In your wallet, on your badge
11. Give your objects a snooze in the database

Down

1. Model, View, _____
3. Warm to this runtime compiler
5. Undermining CVS' dominance since 2004
6. Watch out for this design pattern
8. Rockin' Java blog software

Contributed by O'Reilly Associates

Use Schedule Builder to Pre-Enroll in Sessions!

Using Schedule Builder is one of the best ways to make the most of your time at the 2006 JavaOne conference. Schedule Builder allows you to search our online Content Catalog by speaker, company, topic, keyword, start time, and more! When you find a session you would like to attend, simply add it to your agenda. You can even use Schedule Builder to schedule meetings and it will alert you to scheduling conflicts so you can be sure you're prioritizing the sessions that interest you most.

Attendees must use Schedule Builder to gain admission to technical sessions and Hands-on Labs. Admission to BOFs and General Sessions is on a first-come, first-served basis.

You can access Schedule Builder from any of the Hacker Stations located throughout the Conference facility or by visiting www.cplan.com/javaone2006/schedulebuilder. Log in by using your registration ID number (on your attendee badge) and your email address.

Please note: You must register at least 90 minutes before each session begins and arrive early to secure your seat! Space may be limited, and empty seats will be given away three minutes prior to session start.

If you have questions about Schedule Builder, please visit the registration counter and our staff will be happy to assist you. Visit www.cplan.com/javaone2006/schedulebuilder to start building your schedule.



Java Champion: Romain Guy

By Janice Heiss
May 2006

Snapshot: Romain Guy is a French student currently working as an intern with the Swing Team at Sun. He previously worked as a journalist for computing magazines and translated books for O'Reilly France. He has been using Java technology for many years and now focuses his efforts on UI design and Java technology for desktop programming.

Q: The most important thing for Swing developers to understand is...?

A: Definitely the threading model. It is not at all hard but it can be counterintuitive for beginners. Many introductory books don't deal with it, although there are lots of articles and tutorials that explain the threading model clearly.

Q: The biggest misconception about Java technology on the desktop is...?

A: That it is slow and unsuccessful. Java software is not slow. It's been proven many times, especially by real-world applications like Maple. Regarding the success issue, true, Java technology lacks consumer-oriented desktop applications, but it is widely used within companies. Almost half of the 4.5 million Java developers are Swing developers. This might not be the success some expected, but it is still a success.

Q: The Java class that you couldn't live without is...?

A: `java.awt.Graphics2D`. I spend most of my time creating custom components and graphical effects, so I deal with `Graphics2D` all the time. I really like this class.

Q: Favorite Java book?

A: Perhaps it is no surprise, but *Effective Java* by Joshua Bloch. If Java developers were to read only one book, this is it. It really helped me improve my skills and my knowledge of the Java language and platform.

Q: What do you do when you feel stumped?

A: When I'm at the office, I usually build something out of scrap parts (like a crossbow out of chopsticks or a catapult out of server rack mounts) and then play with it in the hallway. I want to get my mind off the problem and think about something else. Also, sometimes just talking about the problem with someone else helps me see the solution clearly.

Q: Can you describe the process of writing code?

A: The way I write code has changed a lot during the last few years, with the advent of powerful new programming tools such as refactoring in mainstream IDEs. Most of the time, I start by writing a prototype to validate my vision, which I then evolve into the actual code base by refactoring the code. I use this approach at every level, from a few lines of code to a full application module. The prototype approach is often taught assuming that the initial code will be abandoned, and you'll start out fresh, but I'm convinced that if you're rigorous, refactoring can yield excellent results. I also occasionally start with a sheet of paper or by discussing the project with someone to get a good idea of what the architecture should be.

Q: What's the next big technology revolution?

A: I doubt that it will happen, but I'd love to see the disappearance of computers, at least in their current form. They are only tools, but they still get in the way on a lot of tasks. Science fiction writer Peter Hamilton describes personal computers as unobtrusive components of every person. Even though I don't like the idea of being merged with a computer, I like the idea of not using a stupid keyboard or a stupid mouse to try to make a stupid application work.

Q: If you could work on a dream project, what would it be?

A: I am already working on a dream project! I use the Java language and Swing every day to create cool applications. The future is even better because of what Microsoft Vista and Apple Mac OS X let you do in desktop applications. Swing lets you do the same things but it's sometimes harder. This is our next challenge: make modern UIs easy to create.

Q: What recent changes to the platform have made your life easier?

A: J2SE 5.0 with its new language features and the inclusion of the `java.util.concurrent` API have made the Java language a pleasure to program in again.

Q: Where in the process of programming do you have the most fun?

A: The most fun part is when I can see the result of my work, especially when it matches exactly what I had in mind when I started. I love programming because it enables me to bring my vision to life. Considering how bad I am at art, I don't really have a choice if I want to be creative.

Be sure to check out Romain's blog at: <http://weblogs.java.net/blog/gfx/> ■

TODAY'S Sudoku Puzzle

Rating: Moderate

	5	7		1	3			
3			4			8		
				8				
					2		7	5
	1	4					6	
		6		3	4			8
7	3			4		9	1	
			8	2				6
	2	9						



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Code Talk

With Click and Hack, the Type-It Brothers

By Neal Gafter and Joshua Bloch
March 2006



Josh: Hello and welcome to Code Talk.

Neal: Tomorrow is our big day. If you want to test your wits against eight new puzzles, come to TS-1512 “The Continuing Adventures of *Java™* Puzzlers: Tiger Traps” on Wednesday, May 17, at 11 a.m. in Hall B/C.

Josh: OK, I’m sold. And as you may recall, in the first installment of this column we presented our readers with a looper: They were asked to come up with declarations for *i* and *j* to turn this while loop into an infinite loop:

```
while (i <= j && j <= i && i != j) {
}
```

Neal: That’s impossible! If *i* <= *j* and *j* <= *i*, surely *i* must equal *j*! This property certainly holds for the real numbers. Mathematicians call it *antisymmetry*.

Josh: Yeah, the <= operator used to be antisymmetric before Java 5, but no longer.

Neal: You mean we broke it?

Josh: Well, not really. Before Java 5, the numerical comparison operators (<, <=, >, and >=) required both of their operands to be primitives, like *int* or *double*. Since Java 5, you can use boxed primitives, like *Integer* or *Double*.

Neal: Yeah, auto-unboxing. Big deal. So what?

Josh: Well, the <= operator is still antisymmetric on the set of primitive numeric values, but not on boxed primitives. The problem is that the equality operators (== and !=) perform identity comparison when applied to object references. Suppose you declare *i* and *j* like so:

```
Integer i = new Integer(0);
Integer j = new Integer(0);
```

The first two subexpressions (*i* <= *j* and *j* <= *i*) perform unboxing conversions on *i* and *j* and compare the resulting *int* values numerically, so they evaluate to true. The third subexpression (*i* != *j*) performs an identity comparison on the two object references *i* and *j*, which are different. So it evaluates to false, and the loop goes on forever.

Neal: Just like some people I know ... So why wasn’t the language spec changed to make the equality operators do value comparisons when they’re used on boxed primitives?

Josh: In a word, compatibility. You can’t go changing the behavior of millions of existing programs—people would get angry. But the equality operators do perform numerical comparison when only one of their operands is boxed and the other is primitive. This was illegal before Java 5, so there’s no compatibility problem.

Neal: Great. Now it’s my turn. In the last installment, I asked what this program prints:

```
public class Lazy {
    private static boolean initialized = false;
    static {
        Thread t = new Thread(new Runnable() {
            public void run() {
                initialized = true;
            }
        });
        t.start();
        try {
            t.join();
        }
    }
}
```

```
    } catch (InterruptedException e) {
        throw new AssertionError(e);
    }
}
public static void main(String[] args) {
    System.out.println(initialized);
}
}
```

Josh: It looks like it should print true. I tried to run it, but it just sat there. I think my computer’s broken.

Neal: No you dope, that’s what the program does. It’s a deadlock.

Josh: A deadlock? How could that be? There are no locks in it.

Neal: It’s a subtle class-initialization problem. When a thread is about to access a member of a class, the thread checks to see if the class has been initialized. There are four possible cases:

1. The class is not yet initialized.
2. The class is being initialized by the current thread.
3. The class is being initialized by some other thread.
4. The class is already initialized.

When the main thread invokes *main*, it checks whether *Lazy* has been initialized. It hasn’t (case 1), so the thread records that *initialization* is in progress and begins to initialize the class. The main thread sets *initialized* to false, creates and starts the background thread, and waits for the background thread to complete. Then the fun begins.

The background thread invokes its *run* method. Before the thread sets *Lazy.initialized* to true, it too checks whether *Lazy* has been initialized. This time, the class is currently being initialized by another thread (case 3). According to the language spec (Section 12.4.2), the background thread has to wait until initialization is complete. Unfortunately, the thread doing the initialization is waiting for the background thread to complete (with a *join*), so the program is deadlocked.

Josh: Wow! Are you serious? How do you fix it?

Neal: If it hurts when you go like that, don’t go like that. Class initialization is already complicated enough without introducing multiple threads. Do all your class initialization in one thread, and keep it simple.

Josh: Good advice. Do you have another puzzler?

Neal: Why yes. The following program lacks a declaration for *Enigma*, a class that extends *java.lang.Object*. Can you come up with a declaration for *Enigma* that makes the program print false?

```
public class Conundrum {
    public static void main(String[] args) {
        Enigma e = new Enigma();
        System.out.println(e.equals(e));
    }
}
```

Oh, and one more thing: You must not override *equals*.

Josh: I’ve got one too. The following program won’t compile. Why not? And what does the strange compiler diagnostic mean?

```
public class Outer {
    class Inner1 extends Outer {}
    class Inner2 extends Inner1 {}
}
```

Neal: Hah. Good luck. And send us your puzzlers! Send them to puzzlers@javapuzzlers.com. ■

You Ought to Be in Pictures

If a picture is worth a thousand words, how many words are thousands of pictures worth?

Four: The Power of Java™.

This year at the JavaOneSM conference, attendees can take a picture from their camera phone or digital camera and see that image become part of a giant mosaic that builds to the words, “The Power of Java.”

It’s a real-time mediascape capturing the moment in time. And it’s defined by the perspective of the people experiencing it—JavaOne conference attendees.

Participating is simple: (1) Take a picture, (2) send it to JavaOne@Sun.com, and (3) go to the Concourse, where you’ll see your image come up as part of a giant mosaic (the Concourse is the underground hallway that connects Moscone Center South and North).

“The Power of Java is all about the millions of Java technology developers who are driving the platform forward,” said Sun employee Carolyn Cruz, who led the project. “It’s all about individual contributions fueling a massive global movement. So with this experience, we’re giving individuals the opportunity to be

part of a larger picture, literally. The images that people send in will build to a mosaic defined by the words, “The Power of Java.”

Each picture is a tile in the mosaic. As images come in, they’ll be shown full-screen before shrinking back to their tile position in the larger grid.

“We wanted the experience to get richer and richer, the more people participated,” said Hemal Mehtalia, technical lead on the project. “The grid expands to accommodate the number of images that come in, giving greater detail to the mosaic. In creating this Participation Age metaphor for the Power of Java, we wanted to stay true to one of the tenants of the Java platform—progress is cumulative.”

The Power of Java experience is written in Java. The application that processes the images that come in via MMS is handled by *JavaMail*, which extracts the attachment and sends it to an *ImageServlet*. The *ImageServlet* timestamps and logs the location of the image using *JDBC*. The received image is screened in a web-based moderator application and then approved images are rendered in the mosaic (screening prevents vulgar or offensive images).

The JavaOne conference Mosaic will start accepting images on Tuesday at the start of the Conference, through its close on Friday.

Share your perspective! Take a picture and send it to JavaOne@sun.com, and be part of The Power of Java. ■



Celebrating Innovation: Duke's Choice Awards

Jon Byous
May 2006

The fourth Duke's Choice Awards, which spotlight some of the most clever, practical, and inspirational Java technology applications on the planet, have been announced. The ceremony will be held Tuesday, at 4 p.m. in the Moscone Center Presentation Theater in the Pavilion.

James Gosling, vice president and Sun Fellow, who acted as the competition judge, said, "The Duke's Choice Awards give us a chance to highlight the most innovative Java technology-based applications that are submitted by the Java development community. Each year, the judging process gets more complex as more submissions come in from countries around the world—with each one using Java technology in a unique way. The 2006 winners truly showcase the power of Java technology—ranging from enterprise and mobile applications to peer-to-peer networks, gaming, and even robotics."

Who Won?

Mobile Messaging

SVB Technologies, flurrrymail

<http://www.flurrrymail.com>

Java™ technologies: Java Platform, Mobile Edition (Java ME™) MIDP 1 and MIDP 2, Java 2 Platform, Standard Edition (J2SE™) 5.0, Java 2 Platform, Enterprise Edition (J2EE™) Servlet 2.3

Looking for fast access to personal email, news, and RSS feeds from your Java ME technology-enabled mobile phone? Flurrrymail is a quick, easy-to-use mobile messaging solution that is attracting a lot of users. After a short sign-up process on the flurrrymail web site, built on JSP™/Servlets, proxy servers written in J2SE 5.0 then manage your messages, sending short message service (SMS) notifications when messages are available and compressing them to save on mobile data charges. Flurrrymail is available internationally and at no cost for hundreds of mobile phones, email providers, and mobile carriers.

Outstanding Community Contributions to Healthcare

JUG Sardegna Onlus, Blood Donation

<https://jug-avis.dev.java.net/>

Java technologies: J2SE 5.0, web services

Donating blood is one of the most noble and unselfish ways people can contribute to their community. Because phone and standard mail methods of soliciting donations are time-consuming and expensive, the Java User Group Sardegna Onlus, in collaboration with the AVIS Center of Sestu in Italy, created an application that sends SMS messages to member blood donors using mobile phones, PDAs, and the Internet.

Java Everywhere

JMRI group, Java Model Railroad Interface

Java technologies: J2SE 1.3+, Jython/Ruby, JDOM, AJAX, and web services

Java Model Railroad Interface (JMRI) is a



Dukies are given to highlight innovative Java technology-based applications in the Java Development Community.

community based open-source resource for model railroad hobbyists. Over the past decade, model railroad engineers have adopted embedded microprocessors to allow fine control of locomotives, track switches, control towers, and other active elements of the set. JMRI is a common library and set of applications that interface with digital model-railroad hardware. Over 100 people have contributed to this open-source project based on Java technology toolkits, which hobbyists can download.

"People really like this, and the ease of Java-XML integration made it possible," says Bob Jacobsen, one of the project's originators.

Open Source

Apache Software Foundation, Tapestry Web Application Framework

Java technologies: Servlet 2.2, Annotations 1.5

Tapestry is an open-source framework for creating dynamic, robust, highly scalable web applications in Java technology. It complements and builds on the standard Java Servlet API, so it works in any servlet container or application server.

Community

Agilent Technologies, OurTraffic

<http://www.jerryliu.com/OurTraffic.pdf>

Java technologies: Java ME MIDP 2.0 CLDC 1.0, J2SE 5.0, J2EE 1.4

OurTraffic is a location-based, real-time traffic-monitoring system based on a pervasive network of collaborating mobile Java technology-powered devices. As OurTraffic commuters travel, midlets running on their GPS-enabled Java ME technology devices measure their position and velocity, which are then sent to a J2EE OurTraffic portal. The portal then integrates the measurements from lots of Java ME technology devices to provide a comprehensive real-time traffic map on the web.

Emerging Technologies

Perrone Robotics, Inc., Tommy and MAX

Java technologies: J2SE 1.4.2, Java ME CLDC 1.1, and Java Communications API

Tommy, a project of Perrone Robotics,

Inc., is a completely autonomous, Java-technology powered 12-foot-long dune buggy. It was designed for the 2005 DARPA Grand Challenge race in an attempt to be the first robotic vehicle to navigate by itself 150 miles through the Mojave Desert in 10 hours or less.

The functionality came from Perrone Robotics' patent-pending Mobile Autonomous X-bot (MAX) technology. MAX is a general-purpose robotics and automation platform, which dramatically decreases the time and cost involved with developing robotics applications of all shapes and sizes.

Outstanding Platform Contributions

Brian Harry, Contributions to Java SE 6, Project Mustang

<http://mustang.dev.java.net>

Brian Harry, also known as "leouser" on java.net, has been an amazingly active contributor to Project Mustang, having contributed more than half of all the fixes that developers have sent to Sun.

The 114 bug fixes he has contributed to the code base for Java SE 6 have made a significant impact on the future of Java technology. His energy, enthusiasm, and skill at coding have earned him the opportunity to work directly with Sun's Swing/AWT engineering team to attack more complex, critical issues in the code and to have an even bigger impact on the quality of Sun's JDK. Thank you, Brian. You truly convey the spirit of Duke.

Secure Printing Services

Genius Bytes/Ricoh

<http://www.geniusbytes.com/cms/index.php?id=187&L=&L=9>

Java technologies: Java ME, JXTA, PKI

Genius Bytes, a Ricoh developer in Germany, has delivered a PKI implementation of JXTA on Ricoh printers named Office P2P. It enables customers to send documents to each other from any Internet-connected device, as well as printer-to-printer, using Java technology and JXTA technology. One customer, Audi/VW, has over 11,000 Ricoh devices.

Java Card Technology

ICT e-Government Team, City of Sunderland, England

Java technology: Java Card™

Tens of thousands of people in Sunderland, England, carry a new card: a Java Card technology smart card that gives them access to the city's Trust Services Infrastructure (TSI). The TSI is designed to make it easier for service providers in both public and private sectors to deliver advanced services to niche groups at an affordable entry cost.

Finally, "put it on the card" makes economic sense.

java.com Fans' Choice

flyordie.com, 3D 8-Ball Pool

<http://java.com/en/games/desktop/3dpool8ball.jsp>

<http://www.flyordie.com/pool/games.html>

Voted best java.com application by the java.com community, 3D 8-Ball Pool takes you down to the table with great graphics, sound effects, zoom, and online chat. You can compete in tournaments, challenge the champions, and play friends online. ■

2006//CODE: MOTO

Make your mark at Motorola's premier coding competition at the JavaOne conference.

Develop an application that just might become the world's "next big thing" in mobile devices. Categories:

- Best Java Gaming/Multimedia Application
- Best Java Productivity Application (consumer and/or enterprise)

Visit booth #1344 in the JavaOne Pavilion to get the details and submit your application.

The two winners will receive unprecedented exposure for their application with key industry influencers, onstage recognition and marketing exposure from Motorola, four "must have" Motorola handsets, and more.

www.motorola.com/developer

POWER

Continued from page 1

enterprise, or mobility.

In addition, you can employ the JavaOne Conference Event Connect tool to search for and identify people with whom you can network. Share best practices with other attendees. Searching by technology, industry, or company, you can set up meetings with other developers and with the cosponsors and exhibitors that most interest you. Join discussion groups on AJAX (the asynchronous JavaScript™ technology and XML technique formerly known as DHTML), SOA, Java EE, and more. (Note: For those of you interested in what's under the hood, the tool uses a service-operated architecture that relies on SOAP-based web services. Internally, the system leverages a range of technologies, including AJAX, Java technology, and .NET.)

Session Types

While planning your Conference, note that there are several types and levels of expert-led sessions. The Advanced How-tos are deep dives into the inner workings of a technology or implementation. Tutorials lead you step-by-step through unfamiliar APIs, technical standards, or programming practices. Technical Case Studies describe successful implementation of a Java technology-based solution. Industry Panels are lively, moderated discussions among industry leaders and vendors. News From the Leading Edge presentations detail evolving Java technologies, JSRs, and innovations. The Birds-of-a-Feather (BOF) sessions are informal presentations, roundtables, or question-and-answer sessions.

The General Sessions

Throughout the week in the general sessions, you'll hear from Sun and our Platinum Cosponsors. Sun's Scott McNealy, James Gosling, and Jonathan Schwartz will be on hand to discuss where Java technology is going. During the Platinum general sessions, you'll hear from experts Dave Douglas, vice president and chief architect, WebLogic, BEA Systems, Inc.; Erich Gamma, distinguished engineer, IBM Software Group; John Wiegand, distinguished engineer, IBM Software Group and development manager, IBM Rational Software; and Thomas Kurian, senior vice president, Oracle Server Technologies Development, on their current Java technology initiatives.

Sun's Graham Hamilton and Bill Shannon lead the Java Platform Roadmaps general session, outlining key directions for the next Java platform releases. The Mobility general session highlights new capabilities in the Java™ ME and Java Card™ platforms for the cutting-edge mobile and embedded markets, as described by Alan Brenner of Sun's Client Systems Group.

The Five Topics

Using the Conference Schedule Builder, you can plan your Conference around the five main topics: Java™ Platform, Standard Edition (Java™ SE); Java™ Platform, Enterprise Edition (Java™ EE); Java™

Platform, Micro Edition (Java™ ME); Tools; and Cool Stuff. Each topic comprises technical sessions and Birds-of-a-Feather events geared to that specific area.

Java SE

Sure to be a winner is the return of "The Continuing Adventures of *Java Puzzlers*—Tiger Traps," with Josh Bloch and Neal Gafter of Google. Eight new programming puzzles focus on features introduced in the 5.0 ("Tiger") release. The game show format keeps things lively while the puzzles teach you about the subtleties of the Java programming language and its core libraries. The eagerly anticipated concurrency utilities are described by Sun's David Holmes and Brian Goetz of Quidix Corporation in "Simpler, Faster, Better: Concurrency Utilities in JDK Software Version 5.0"—including a rich set of high-level concurrency constructs, such as thread pools, semaphores, mutexes, condition variables, locks, barriers, and high-performance concurrent collection classes. "Eight Ways to Be More Productive Developing Swing Applications" shows that the powerful Swing GUI toolkit can be constrained into a simple-to-use tool for GUI application development, per speaker Ben Galbraith. There are more than 45 sessions in this topic, so we've barely touched the surface.

Java EE

Ben Galbraith shows up again with Dion Almaer of Ajaxian, Inc. to provide an "Introduction to AJAX" as shown in the ultra-cool Google Maps UI. Linda DeMichiel of Sun covers the new features in "Java Technology-Based Persistence" introduced in the simplified, plain old Java technology object (POJO) persistence architecture. Rod Johnson, the father of Spring, takes you on a "Spring Framework Update" as it uses the new EJB™ 3.0 specification persistence API described in the earlier session. Then you have another 50 or so sessions from which to choose.

Java ME

In the Mobility general session, Sun Microsystems' Alan Brenner talks about the latest developments in the Java ME and Java Card platforms, and how the platforms are evolving to meet the demand for compelling new services for these high-volume markets. Srikanth Raju of Nokia Corporation goes over the "Best Practices in UI Design and Programming for S40, S60, and S80 Platforms." Sun's Bill Foote describes the technology highly touted to replace DVDs in "Bluray: Java Technology Goes Hollywood." In "Location API: Practical Application of JSR 179," Zane Lyon and Ryan Wick of Nextel will show how they've deployed handset- and network-based location applications. There are more than two dozen sessions and numerous BOFs in this topic presented by market and technical leaders in the mobile ecosystem.

Tools

No matter which platform you use, there are tools to enhance successfully developing for and deploying to the Java platform. Tools such as NetBeans™, Eclipse, Sun Java™ Studio Enterprise, JDeveloper, Apache Derby, IntelliJ IDEA, Sun Java Studio Creator, and JUnit are

covered in more than 15 technical sessions. Source code editors, plug-ins, performance analysis, modeling and monitoring systems, and collaboration tools all show up in this space.

Cool Stuff

These sessions have only one thing in common: the cool factor. For instance, there's "Bi-Fi: Just Like Your Doctor!" in which Shahin Farshchi of Vista Integration Systems and Kiran Patel of Sun describe this state-of-the-art patient-monitoring system. Paul Perrone of Perrone Robotics describes the Java technology-powered "Robotic Dune Buggy Named Tommy" and his experiences at the DARPA Grand Challenge event. Another dozen or more sessions touch on Squawk, Groovy, JRuby, a Sony PlayStation emulator, and other creative inventions.

Hands-On Labs

Approximately 40 wildly popular, wide-ranging labs cover technologies from all five topics, with 15 instructor-led labs. You get hands-on practice on technology that's of interest to you. Here's a small sampling of the labs: "Using Dtrace on Java Applications in Solaris™ 10," "Explore Java SE 6 ('Mustang') Features," "AJAX: Riding the Web Application Horse a Little Farther," "NetBeans IDE 5.0: Plug-In Development," "Developing Interoperable Next-Generation Web Services With GlassFish™ Project, NetBeans IDE, and Java WSDP," and "Understanding Requirements: Use Case, Domain, and Component Modeling."

Java University

On Monday, Java University offered three stand-alone courses. These intermediate and advanced courses were created and delivered by Sun-certified instructors who are experts in Java technology.

For Java EE application developers, "Implementing Business Logic Using Enterprise JavaBeans™ Architecture for the Java EE Platform" described how to build and deploy enterprise applications using session EJB components as facades to the business components, entity CMP beans as persistent data representation, and message-driven beans as Java Message Service consumers. For Java EE platform architects, project managers, and development managers, "How J2EE Patterns Help in Architecting and Designing Robust Java EE Applications" provided an understanding of J2EE technology patterns and how valuable they have proven to be in implementation and in solving recurring design problems. For web services developers who use Java API for XML-based RPC (JAX-RPC), "Using JAX-RPC to Enable Java EE Platform Applications to Interoperate With Applications That Are Not Java Technology-Based in a Secure Web Services Framework" went into the functionality provided for creating web services and the two development approaches supported by the JAX-RPC API. Finally, for Java technology web component developers, "Exploring the Struts Framework and How it Supports Web Component Development" described the roles of the view and controller components within the web tier.

NetBeans Software Day

Monday was also the third annual NetBeans Software Day, a companion event at San Francisco's Argonaut Hotel. Java technology father Gosling and other luminaries discussed the future of Java technology developer tools and the rich client platform. A reception followed the event.

JavaOne After Dark™ Events

Think you can rest after a full day of technical sessions and the like? JavaOne conference activities continue into the evening hours.

Conference alumni gathered "around the hearth" and got some quality time with Java technology experts and executives from Sun Microsystems at the annual Fireside Chat. The Fireside Chat took place on Monday, followed by a Welcome Reception. (If you're new to the Conference this year, you'll be an alumni next year!)

Birds-of-a-Feather (BOF) sessions abound from 7:30 to 11:20 p.m. There are a plethora of BOF sessions from which to choose, also aligned along the five topics. Some sessions let you "Meet the Team" that's busy engineering the latest versions of your favorite flavor of Java technology.

The Pavilion Reception on Tuesday, May 16, offers participants, technology representatives, and experts a chance to mingle from 6:30 to 8 p.m.

The JavaOne conference "After Dark" Bash on Thursday, May 18, starts at 7 p.m. and lasts through 10 p.m. It's your last chance to catch up with old friends, say, "Until next year!" to new friends, and unwind after the excitement of the past three days.

Places to Catch Your Breath

The Moscone Center is centrally located in downtown San Francisco, with nearby Yerba Buena Gardens, a two-block urban oasis offering an ice-skating rink and bowling lanes. But within the convention center itself, there are respites when you just need a brief break from the technical sessions.

The JavaOne Pavilion showcases the products and technologies of the Java community. The Pavilion floor is always an exciting place to walk around and absorb Java technology.

The "Experience the Power of Java" section of the Pavilion floor provides a hands-on area to play with Java technology-based products, applications, games, and more.

Hacker's Labs are conveniently located throughout the Pavilion for your personal needs. This is the place to go online—check your email, handle online business, and surf the web.

Conclusion

Come to the 2006 JavaOne conference! Experience one of the single-largest Java community events, with hundreds of expert-led, in-depth technical sessions, Birds-of-a-Feather sessions, Hands-on Labs, industry panels, advanced how-tos, technical case studies, and tutorials over the course of four days. After celebrating its 10th anniversary in 2005, it's time to revel in The Power of Java as it enters its second decade. ■



NetBeans Software Day 2006 — Empowering Developers Worldwide

Ruth Kusterer
May 2006

It's like hitting the switch in a power station. The 12-city NetBeans™ IDE World Tour is spreading like wildfire from Toronto to Brasilia, from Tokyo to Johannesburg, and back to San Francisco. Millions of Java technology developers already plug into NetBeans IDE 5.0, and NetBeans IDE 5.5 is on its way to empower even more.

Registration numbers for NetBeans Software Day rose to new heights: On Monday, about 1,000 developers squeezed into one of the bigger halls in San Francisco's Argent Hotel—twice as many as last year. What an electrifying year for the NetBeans community.

NetBeans Software day at the JavaOne™ 2006 conference began with Tim Cramer's opening keynote. Now senior director of Java Tools at Sun, Cramer announced the Subversion support module that will be included in the final release of the highly anticipated NetBeans IDE 5.5 release. The latest beta is already a popular download among developers, with improved versioning control and many more extended Java enterprise, Service-Oriented Architecture (SOA), and

Unified Modeling Language (UML) features—all right out of the box and free.

Cramer revealed that the successful launches of NetBeans IDE 5.0 and 5.5 beta have attracted more than 100 commercial and community partners this year, and more are joining each week. Among them are Sprint, a global provider of communication services; InsiTech, a contributor of ultra-thin rich-client Java interfaces; Lattix Inc., the source of the Lightweight Dependency Models plug-in; Ricoh Company Ltd., one of the leading global manufacturers of office automation equipment; Apache Maven, with its project management and comprehension tool; and SavaJe, the developer of the most advanced Java technology-based mobile operating platform. And just today, JBoss and AMD have joined, too.

Cramer then handed the microphone to Jonathan Schwartz, the new president and chief executive officer of Sun Microsystems. Schwartz introduced Rich Green, who recently returned to Sun as chief of the software group and consequently had to bear some of Schwartz's jokes. On a more serious note, Schwartz pointed out the importance of good tools, because his experience showed that working with good tools increases the engineers' working morale significantly. One pret-

ty clear example for such a tool—Sprint's NetBeans IDE-based Mobility IDE—was demonstrated live.

But when Joshua Bloch and Neal Gafter, also known as “Click and Hack, the Type-It Brothers,” showed up onstage with a bunch of optical illusions, the audience was a little puzzled. Bloch is the chief Java architect at Google and author of the Jolt Award-winning book, *Effective Java*. He is co-author of *JavaPuzzlers: Traps, Pitfalls, and Corner Cases*, together with fellow Google employee Neal Gafter, a software engineer and Java evangelist.

Their presentation's connection to NetBeans Software Day soon became clear when they proceeded to show code illusions: pieces of code that seemed straightforward enough but that did not behave as expected. What if the IDE could not only detect these common and hard-to-notice errors for you but also fix them? Enter Tom Ball with Jackpot, NetBeans IDE's new secret weapon. The audience broke into applause at his presentation of Jackpot, which he described as a very advanced “FindBugs plus Refactoring on steroids.” The Jackpot module is available for testing on the beta update center.

Before the in-depth sessions started, Bob Brewin quickly talked about Sun's tools strategy and the future of the four free IDEs—Sun

Java™ Studio Creator (JSC), Sun Java™ Studio Enterprise (JSE), NetBeans IDE, and Sun™ Studio.

Do you mainly create rich web applications? Let JSC help you. Do you specialize in SOA and enterprise applications? Try JSE. Do you live on the leading edge? Try NetBeans IDE daily builds. Or are you focusing on C/C++ development on the Solaris Operating Environment and Linux operating system? Go with Sun Studio. These features will become available over the course of this year in one standard distribution of the NetBeans IDE. This process is starting now with version 5.5 and the Enterprise Pack, and it will continue with the release of the new native C/C++ support.

Apart from development for the Java Platform, Enterprise Edition (Java EE) 5, the sessions that followed addressed the next generation of GUI building, for example, Project Matisse; the advantages of building rich client applications on the NetBeans platform; as well as state-of-the-art mobile application development with NetBeans Mobility Pack and the new SavaJe CDC pack. For each of these topics, NetBeans software engineers and technology evangelists had prepared live feature demonstrations for the attendees.

See NETBEANS, page 14



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Conference UPDATES

ADDITIONS

TS-9171 | Mobilizing Enterprise Processes With XML

Tutorial • JAVA ME

Beyond the myth and hype, Service Oriented Architecture (SOA) has become the standard for designing flexible and extendable distributed enterprise systems, deployed by corporations all around the globe as web services that expose their interfaces through WSDL and exchange data in SOAP documents. In this sense, the XML technology platform is fundamental to the SOA: XML documents and schemas passed between services or components fully standardize the format and typing of all data communicated in a vendor-neutral, platform-agnostic way.

On the other hand, with more than 250 million Java™ enabled handsets on the market, Java Platform, Micro Edition (Java ME) is the de-facto standard environment in mobile application development, and consumption of web services by smart Java clients would be the natural evolutionary path for enterprises wishing to mobilize their technology assets. Unfortunately the lack of XML-aware APIs, together with other limiting factors, has precluded a real mobile SOA environment to take off.

Nevertheless the XML and web services API specification (JSR 172) recently introduced a robust mechanism for mobile web service consumption, which combined with the forthcoming Next Generation Mobile Java (NGMJ) platform is bound to dramatically change the status quo in the relatively unexplored area of mobile business software.

Now going one step further, why limiting our horizon to just define a data model, when XML can also effectively address our presentation needs? The idea is old: not surprisingly, it lies beneath mark-up languages and web browsing. However, the interaction of Java technology, web services and mobility opens very interesting possibilities in form-based rapid application development (RAD).

In this Technical Session we will introduce the audience to several alternatives in mobile SOA and XML processing, optimization hints like WBXML compression for optimized data traffic, as well as some Java XML UI engines, as well as an advanced preview of the NGMJ improvements, stressing the key lessons with sample code and working demos. *Isaac de la Pena, Nokia Enterprise Solutions. Wednesday, May 17, 12:15–1:15 p.m., Esplanade 301.*

TS-8152 | Enabling the IP Multimedia Sub-system (IMS) with Java Technology

Leading Edge • JAVA ME

IMS (IP Multimedia Sub-system) is the blueprint for an Application Revolution. This session allows you to understand the fundamentals of IMS and how Java™ technology is being increasingly used to implement this architecture and enable this Platform. IMS is widely seen as a key technology for fixed/mobile network convergence, which makes it a hot ticket. Many vendors and serv-

ice providers now see IMS as the single most important telecom technology development of this decade.

In this session, we will particularly focus on developing applications in Java technology for enabling the next-gen IMS services. With the emergence of converged telecom and business logic applications, the industry is looking for architectures that can support the combined development.

SIP is a hot topic in today's Java software telecommunications development community, but there is little to be said on the issue of how it fits architecturally into the existing world of Java Platform, Enterprise Edition (Java EE platform). We give you an overview of some of the prevalent key standards, including SIP Servlet and JAIN SLEE. We go over some reference architectures on how to integrate Java EE applications into telecom IMS applications. We spend the bulk of the session going into example applications, complete with code samples and demonstration. *Phelim Odoherty, BEA Systems, Inc.; Alka Gupta, Sun Microsystems, Inc. Friday, May 19, 10:45–11:45 a.m., Esplanade 303.*

TS-6696 | Testdriving the Rich Client Platforms

Advanced How-To • JAVA SE • Desktop

This session demonstrates how different Rich Client Platforms (RCPs) affect development of Graphical User Interface (GUI) applications for the desktop. The RCPs shown in this demonstration are the Spring Rich Client, the NetBeans™ Platform and the Eclipse Rich Client Platform. The focus of the session is to point out the difference between the RCPs from an application developer's point of view not to discuss the inner workings of the RCPs. The advantages of each platform given different application requirements will be explored.

A simple data entry application has been developed using each of the three RCPs. The application is developed using Java 2 Platform Standard Edition 5.0 and Java Foundation Classes (J.F.C./Swing) and deployed over the network with Java Web Start. Hibernate is used for data-access and SwingX-components to improve the GUI. The development of the application is done using Eclipse 3.1.

The knowledge attendees will take with them from this session is an overview of what the current RCPs can offer when developing rich GUI-applications easier and also some concrete code examples of how it is done. There are no other prerequisites than some basic understanding of Java and J.F.C./Swing and an interest in GUI application development. *Mikael Boman, Citerus. Friday, May 19, 12–1 p.m., Esplanade 303.*

TS-6037 | To Know the Dependencies is to Understand the Architecture

Advanced How-To • TOOLS

This session will present a new technique which utilizes inter-module dependencies to represent and manage the architecture of complex software applications. Using these dependencies we build dependency models, which provide a precise big picture view of the

architecture. These models use a Dependency Structure Matrix (DSM) to provide a developer's view of the architecture that is highly scalable compared to the directed graph approaches that are common today.

We will demonstrate this approach by applying it to a number of commonly used applications each consisting of hundreds or thousands of classes. We will show how dependency analysis can be used to extract the architecture for applications such as Ant, JUnit, jEdit, Eclipse Platform, and NetBeans Platform. Finally, actual dependency models will be created for multiple generations of an application to highlight how architecture evolves and how it often begins to degrade. *Neeraj Sangal, Lattix, Inc. Friday, May 19, 1:15–2:15 p.m., Esplanade 304/306.*

TS-9542 | Creating Good, Simple, Single-Server Web Applications

Tutorial • JAVA EE • Web Tier

When building a web application it is easy to get lost in the hype of new technologies and plethora of Java Platform, Enterprise Edition (Java EE) APIs. What if you just want to set up a single web server with a Java technology-powered web site? It doesn't take much time, nor need it be overly complex. This tutorial cuts through the fluff and shows you how to easily set up and use the Servlet and JavaServer Pages (JSP) application to make a Java technology-powered web site in less than an hour. What if you need more? The tutorial ends with the most common growing pains of a small web site and how you can prepare so that they are not a problem.

All code and examples of this tutorial are freely available for use and open-source, including the tools used by the example. You can follow along and set up your own web site during the talk or at a later time with no hidden costs or licensing restrictions. The presenter is a current member of the JSP expert group, author of Servlets and JSP; the Java EE Web Tier, and a Java EE Web Tier course instructor for the DevelopMentor training company. Not to forget a long time Linux/Java open-source proponent. *Casey Kochmer and Jayson Falkner, Amberjack Software. Friday, May 19, 1:15–2:15 p.m., Esplanade 303.*

TS-6218 | How to Write APIs That Will Stand the Test of Time

Advanced How-To • JAVA SE • Core Platform

Creating a library for others appears to be simple, but developing its APIs in a sustainable way that can evolve backward compatibly is not a trivial task at all.

With the rise of more and more Java™ technology projects around the world and increased sharing of code among them, the art of writing maintainable APIs gets more important than ever. Right now we have to figure this stuff out for ourselves, and it's critical for anybody writing software that the software be used by another programmer. This presentation, based on our more than five years' experience, is our little contribution to help people know what we know, and make better Java technology software.

In this session we explore API design patterns and anti-patterns and teach how to identify those ideas that seem like good ones, but carry a hidden, sometimes nightmarish burden of maintenance, a burden all too often discovered only after the API has been in public use for a few years. *Radim Kubacki; Tim Boudreau; and Jaroslav Tulach; Sun Microsystems, Inc. Friday, May 19, 2:30–3:30 p.m., Gateway 102/103.*

TS-6673 | Federated Web Services with Mobile Devices

Advanced How-To • JAVA ME

JSR 172 (<http://jcp.org/en/jsr/detail?id=172>), the Java Platform, Micro Edition (Java ME) Web Services Specification, is a key Java ME specification that defines APIs enabling mobile devices to invoke web services.

Mobile devices are becoming ever more popular means of transacting business; at the same time carriers and service providers are looking to differentiate themselves from their competition and cater to the ever increasing demand to provide more services to their consumers. This session describes a means of securely providing access to web resources and web services using open standards such as OASIS SAML V2.0 and Liberty ID-WSF from a Java ME-enabled mobile device.

Wireless carriers act as Identity Providers (IDPs) in business alliances known as "Circles of Trust" (COTs), authenticating customers and providing them secure access to a range of Service Providers (SPs). This federated model gives customers a seamless experience that is much more than the sum of its parts. For example, a wireless carrier could form a COT with itself as IDP and SPs providing services such as email, calendar, mapping, weather, hotel reservations, travel information and ringtones. A customer authenticates at the wireless carrier. The carrier then provides secure single sign-on to each SP via signed assertions of the customer's identity.

As we move from simple single sign-on to identity web services, this federated environment forms the basis for providing a portfolio of services to the customer. For instance, the wireless carrier could host a location service enabling SPs to provide value-added services such as weather and hotel reservations based on the customer's current location.

The Liberty ID-WSF and OASIS SAML V2.0 standards provide the necessary security characteristics such as privacy, confidentiality, user consent and non-repudiation to make such interactions work in a federated environment. This session will show developers how a Java ME-enabled mobile device can use JSR 172 to leverage ID-WSF and SAML V2.0 in accessing federated services and providing real value to customers. *Rajeev Angal and Pat Patterson, Sun Microsystems, Inc. Friday, May 19, 2:30–3:30 p.m., Esplanade 301.*

TS-9180 | Java Technology on the Client

Tutorial • JAVA SE • Desktop

All the web 2.0 excitement coming out of Google, Amazon, Yahoo! and the other web

(continued on next page)



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giants has forever changed user expectations about how they engage with applications. Also, SOA, compositing, mashable and remixable applications have increased developer expectations on how easy it is to build applications. SWT, JFace, Spring-MVC, Swing, and several vendor-specific programming models provide answers on how to build clients for Java applications. Live data feeds, loose binding, service transparency, and other SOA development patterns further complicate developers decision-making process for application architectures. Not enforcing adherence to standards inevitably leads to maintenance and update difficulties down the road.

Application frameworks can reduce these difficulties by simplifying the deployment of new modules and updates to existing ones on demand. But which framework is the best for your next project? How do you decide? In this session we will take one application, and build it using a variety of methods to explore the benefits and drawbacks of each approach. Working examples and code snippets will also be presented for comparison with each approach we take. *Duane Nickull, Adobe Systems. Friday, May 19, 2:30–3:30 p.m., Hall E 135.*

TS-8360 | Using Java Technology-based Neural Networks to Predict Trauma Mortality

Leading Edge • COOL STUFF

The National Trauma Data Bank (NTDB) is the largest aggregation of trauma registry data ever assembled. It contains over one million records from 405 U.S. trauma centers. Analyzing this multi-dimensional data for patterns is beyond the scope of any individual or any single computing system.

Java technology-based neural networks allow this vast amount of data to be analyzed for mortality prediction, based on patterns associated with injury type, location, and severity. Java technology is the key in allowing large distributed networks to analyze the data in a platform-independent manner.

In this session, we discuss the implementation of a neural network using Java technology and the open source Java technology-based Object Oriented Neural Engine (JOONE) neural network framework. Topics covered include brief overviews of the NTDB data and neural networks, justification for using a Java technology-based neural network, a survey of Java based neural network implementations, criteria for selection of a neural network framework, an overview of the JOONE framework, the distributed computing topology, lessons learned during development and implementation of the network, and future directions for the research. *Robert Gatliff, Memorial Health, Savannah, Ga.; Brian Briggman, Software Consultants Inc. Friday, May 19, 2:30–3:30 p.m., Gateway 104.*

TS-8614 | AJAX and Persistence: Emerging Patterns and Pain Points

Leading Edge • JAVA EE • Web Tier

AJAX (Asynchronous JavaScript and XML) has generated a renaissance of rich web client development. At the same time, this development model poses issues of complexity for developers. Many issues focus on the browser

interactions, but integrating the web experience with data from the database still poses challenges for developers.

With AJAX, there is more back-and-forth communication between client and server with smaller pieces of data. What persistence models will best meet your requirements? What are the good, bad and ugly design patterns involved? How is mapping between the Document Object Model and persistent object model done?

Frameworks like Ruby on Rails make use of the Active Record pattern; other frameworks are organized assuming a Data Mapper pattern. What is the relation between these and the new Java persistence spec? How do you implement and take advantage of the active record pattern using Java technology? How can you implement declarative validation rules which may be used either on client or server side (or both).

This talk will discuss simple read-only AJAX scenarios as well as more advanced use cases where data modification and transactions are involved. *Larry White, Smitha Kangath, and Craig Russell, Sun Microsystems, Inc. Friday, May 19, 2:30–3:30 p.m., North Meeting Room 121/122.*

TS-8943 | NetBeans Common Framework for Information Visualization

Leading Edge • TOOLS

Modern tools are moving towards representing information visually rather than textually. For example, classes, XML schemas, business processes and MIDP application flow can all be manipulated and displayed as graphs of various visual notations. The purpose of this session is to introduce a common framework for the NetBeans™ Platform for building such modern tools. This framework will let developers easily build tools to visualize information modeled as graphs, relations and arbitrary free-form structures. It will support the following features: (1) industry-standard layout algorithms such as orthogonal and hierarchical, (2) visually pleasing and user-definable look-and-feels, (3) modern drag-and-drop style of user interactions, and (4) support for different rendering technologies such as SVG and Java™ 2D. Developers can also easily customize and extend this framework.

This session will first introduce the audience to visualization, its applications and the challenges facing developers. It will then describe the framework, its required features, proposed implementation, roadmaps and future plans. Finally, the session will demonstrate features of the proposed implementation such as defining the look-and-feels of components. *David Kaspar, Martin Ryzl, and Peter Liu, Sun Microsystems, Inc. Friday, May 19, 2:30–3:30 p.m., Esplanade 303.*

TS-9056 | Java Technology-based Persistence API for Dummies

Tutorial • JAVA EE • Core Enterprise

Marina Vatkina, tech lead and Mitesh Meswani, senior developer of the persistence team at Sun Microsystems will present a concise tutorial to the Java technology-based Persistence API. No prior knowledge of Java Platform, Enterprise Edition (Java EE) or ORM is required to follow the presentation.

See UPDATES, page 12

2006 JavaOne “After Dark” Bash

Thursday, May 18, 2006 | 7–10 p.m.

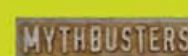
Moscone Center, Hall A

Join us for the annual “After Dark” Bash! This year’s program will captivate you like never before: Weird and wacky experiments, bubbling potions, and strange results will create an atmosphere you will not want to miss! Let the mad scientist emerge from within!



“After Dark” highlights include:

- **Myth or urban legend?** Just call on mythbusting team Adam Savage and Jamie Hyneman to put things to the test. Each week these special-effects experts take on three myths and use modern-day science to show you what’s real and what’s fiction on Discovery Channel’s *MythBusters*. Join Adam and Jamie as they share bloopers, blunders, and offbeat stunts. Enjoy clips of trial and error from their popular weekly series, and see how these mythbusters shake (or break) things up.



- **Special appearance by Johnathan “Fatal1ty” Wendel**, the most accomplished, professional PC Gamer in history. No one has ever come close to the earnings, titles, and media coverage of Fatal1ty. His record of success speaks for itself. He presently reigns as the only five-time World Champion, winning each title in a different game, a feat never before accomplished. Play Quake 4 with Fatal1ty and witness how this pro shakes up the video game world!

Enjoy these and other popular activities, interactive games, and food and drinks. Pick up your wristband for entrance to the bash at the Registration Counter in North Upper Lobby, on Thursday, May 18, after 3 p.m.

UPDATES

Continued from page 11

The presentation will start with simple examples and expand on it to illustrate various features of Java Persistence API. The presentation will be code centric. The attendees will get a head start on using the persistence API effectively. *Pramod Gopinath, Mitesh Meswani, and Marina Vatkina, Sun Microsystems, Inc. Friday, May 19, 2:30–3:30 p.m., Hall E 134.*

TS-6224 | Six Things I Want in an XML Binding Layer

Advanced How-To • JAVA EE • Web Tier

The use of XML throughout the Java community is extensive. Developers are faced with a myriad of choices when dealing with XML. This session will give the attendees the criteria they need to pick the solution that is best for them. When picking an XML binding layer it is important to look at the following criteria: Usability XML binding layers provide a better means of handling XML than dealing directly with a parser. In turn some binding layers are easier to use than others. Often this comes down to how the binding information is specified. Internal specification using Java annotations (JSR-175) and external specification using XML will be discussed. Performance Each XML binding solution has its own internal mechanism of dealing with XML be it DOM, SAX, StAX (JSR-173) or proprietary. The advantages and disadvantages of each of these mechanisms will be discussed. Parser Independence Consider the environment that the binding solution must run in. A common environment is an application server; each comes with an XML parser. If the XML binding solution you've chosen is dependent on a different parser it may not be usable with that application server. Standards Compliance Java Architecture for XML Binding (JAXB) (JSR-31) has been introduced as the XML Binding standard. In JAXB 2.0 (JSR-222) objects are implementation independent, allowing you to easily switch between implementations and avoiding vendor lock-in. Compatibility With Other Standards XML binding is seldom the only technology used to build an application. We will discuss how to choose an XML binding layer that is compatible with other standards such as EJB 3.0 (JSR-220). Service Oriented Architectures SOAs are growing in popularity. Java API for XML-Based Web Services (JAX-WS) 2.0 (JSR-224) will make this easier for Java developers than ever before. We will discuss what impact JAX-WS 2.0 has on the type of XML binding solution you should choose. *Blaise Doughan, Oracle Corp, and Shaun Smith, Oracle TopLink. Friday, May 19, 2:30–3:30 p.m., Esplanade 307-310.*

TS-6264 | Secure XML Processing using Chip Multi-Threaded Processors

Advanced How-To • JAVA EE • Web Tier

Chip multi-threaded (CMT) processors offer high degree of parallelism using multiple processor cores and multiple hardware threads per core in addition to having low power requirements. But how does a secure XML processing web application perform and scale

on CMT processors? How do you develop a robust and scalable XML processing application in Java™ technology to take advantage of the highly thread-rich environment of CMT? During this presentation, we will provide insights into the typical CMT architecture and how you can use a CMT processor for the common XML processing tasks of parsing, binding, signature and encryption using three distinct technologies.

In the first part, we will look at the Streaming API for XML (StAX) and how it can be used to construct a parser that can look for elements and attributes of interest in multiple XML documents in parallel. The second part will deal with data binding of XML elements to Java objects using the Java Architecture for XML Binding (JAXB) and how one can construct a similarly high throughput application that takes advantage of Chip Multi-Threading. The final part of the presentation will be about security and XML, in particular the requirements for digital signatures and encryption (JSR 105 and 106). This section will show how a Java application for XML processing can take advantage of the cryptographic acceleration capabilities that are natively present in CMT processors. We will conclude with a live demo that shows how all the threads and processing units of a specific CMT processor (Sun UltraSparc-T1) can be utilized to create a highly scalable XML processing application. The audience will get a complete understanding of the issues one needs to be cognizant of to get excellent performance and scalability while doing secure XML processing on a CMT processor. *Pallab Bhattacharya, Biswadeep Nag, and Kim Lichong, Sun Microsystems, Inc. Friday, May 19, 3:45–4:45 p.m., North Meeting Room 121.*

TS-6877 | JavaServer Faces, AJAX and Portlets: Developing Apps Without Distress

Advanced How-To • JAVA EE • Web Tier

The newly-rediscovered techniques of remote scripting have caused a lot of discussion over the past year. The snappy AJAX acronym (Asynchronous JavaScript technology and XML), coupled with the ever-increasing need to exploit available resources in an optimal way has promoted this to the extent that everyone wants to add these features to their own applications. Of course, over the past few years, Portlets have become increasingly popular, particularly with its standardization, and JavaServer Faces (JSF) technology is already well-known as the Web UI technology of choice in Java Platform, Enterprise Edition (Java EE) applications. An application utilizing all three of these technologies can provide a very good experience to end-users. However, this is not painless: There are a number of issues that can make creating such an application very difficult and can create a negative experience for your end-users.

The goal of this session is to show how these techniques can be used with JavaServer Faces technology in a Portal environment, so that the resulting application performs well and is as robust as users expect, and does not behave in a confusing and unfriendly manner. To get the best from this session, attendees should be familiar with web development and be at least aware of JSF, AJAX and Portlets.

Afterwards, they should be able to use this knowledge in their own applications, creating applications that avoid the pitfalls and provide a consistent reliable experience to their end-users. *Brendan Murray, IBM. Friday, May 19, 3:45–4:45 p.m. Esplanade 307-310.*

TS-8339 | XJ: Facilitating XML Processing in Java Technology

Leading Edge • JAVA SE • Core Platform

Current mechanisms for developing XML-based applications in the Java™ language provide minimal support for ensuring that programs are correct with respect to the XML schemas governing the XML data. With data-binding approaches such as Java Architecture for XML Binding (JAXB), a programmer must understand how the specification maps XML schemas to Java classes and not program merely in terms of the XML data. Furthermore, there is no support for ensuring the correctness of XPath expressions evaluated against documents. In these systems, a mistyped XPath expression (where one of the element names is misspelled) would not raise an error at run time—it would silently return no results. Finally, run-time library approaches to XML, such as DOM, cannot take advantage of compiler techniques in order to optimize the performance of XML processing. The high cost of processing XML is a common complaint.

The XML Enhancements for Java (XJ) project extends the Java language with first-class support for XML. In XJ, one can import XML schemas just as one does Java classes. All the element declarations in the XML schema are then available to programmers as if they were Java classes. Programmers can write inline XPath expressions on these classes, and the compiler checks them for correctness with respect to the XML schema. In addition, it performs optimizations to improve the evaluation of XPath expressions. A programmer may construct new XML documents by writing XML directly inline. Again, the compiler ensures correctness with respect to the appropriate schema. By integrating XML and Java technology, XJ allows programmers to reuse existing Java libraries in the development of XML code and vice-versa.

The XJ language has the following advantages:

1. Familiarity (for the XML Programmer): XML processing in XJ is consistent with open XML standards.
2. Robustness: XJ programs are strongly typed with respect to XML Schemas. The XJ compiler can detect errors in uses of XPath expressions and construction of XML data.
3. Easier Maintenance: Since XJ programs are written in terms of XML and not low-level APIs such as DOM or SAX, they are easier to maintain and modify if XML Schemas change.
4. Performance: Since the compiler is aware of the use of XML in a program, it can optimize the runtime representation, parsing, and XPath evaluation of XML.

We have released a prototype compiler and runtime system on Alphaworks (<http://www.alphaworks.ibm.com/tech/xj>). We will show through examples how XJ can reduce the complexity of developing XML applications. *Mukund Raghavachari, IBM. Friday, May 19, 3:45–4:45 p.m., Gateway 102/103.*

TS-9123 | How NikeID Hurdled the Java Technology and Flash Barrier

Technical Case Study • COOL STUFF

For the past six years the tool to manage NikeID had grown organically. When the number of products and complexity of data became too overwhelming to deploy, a team was assembled to build a better system.

In this technical case study we examine how this team utilized Java™ technology and Flash to allow the users to better input and visualize the data. We will answer the following questions:

- How did we leverage open source software to hurdle the communicate barrier between Java technology and Flash
- How did we synchronize the data model between the server and the client tier
- What improvements did we make to deploying the data

Also, we will discuss why we made each choice and reflect on if it is still a good choice. While this talk is specific to our technical solution, many of the concepts can be generalized to developing applications where the data is complex or where the data must be staged and released on a specific schedule. *Travis Davidson, Kirk Jones, and Jonathan Hager, Nike, Inc. Friday, May 19, 3:45–4:45 p.m., Gateway 104.*

TS-9764 | Smartcard Managers Overview Basics, Standards, Federal Mandates and Examples

Q/A • Tutorial • JAVA ME

Goals:

- Explain smartcards basic nut-and-bolts
- Explain some smartcards shortcoming and vulnerabilities
- Explain smartcards place in fulfilling HSPD-12 and PIV-I/II and REAL-ID Act
- Demonstrate real Javacard authentication system

History of smartcards:

Smartcard basics

- Microprocessor cards/memory cards
- Contact/contactless cards
- What are smartcard for and what can smart-cards do?

Smartcard programs

- Programs built-in by manufacturer
- Programs developed/deployed after manufacture
- VISA's standard
- Microsoft and IBM enhancements
- Other proprietary vendors built-in functionality you can use API (e.g. Schlumberger (Axalto), Gemplus)
- Some attacks and defenses

Industry and government security standards and guidelines

- Homeland Security Presidential Directive-12
 - Personal Identity Verification (PIV) I / II
 - REAL-ID Act
 - Cyber Security: A Crisis of Prioritization, Presidents Info Tech Advisory Com 2005
- Real-life examples of smartcard programs for:
- Authentication
 - Authorization
 - Wallet and loyalty apps
- Seth Meltzer, U.S. Treasury/IRS. Friday, May 19, 3:45–4:45 p.m., Esplanade 303.*

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TS-9263 | Recommendations for Web Services Development

Tutorial • JAVA EE • Core Enterprise

This talk is for those that aspire to develop web services in a simpler manner. We will show how to develop, deploy and debug web services in minutes. Java Platform, Enterprise Edition (Java EE) 5 is making this simpler by adding support for web services annotation. We will share our recommendations for the new web services annotations. This talk will also share tips for enterprise deployment. Hear from Java BluePrints group experts on how to deal with emerging new technologies in the web services space and their recommendations for end-to-end real life application development. *Mark Basler, Nazrul Islam, and Satish Viswanatham, Sun Microsystems, Inc. Friday, May 19, 3:45–4:45 p.m., Hall E 134.*

TS-9925 | XXL—Large Java Card™ Technology-based (U)SIM Cards—The Advanced Mobile Communication Enabler for the Future

Java ME

Simon Reed, Sagem Orga. Thursday, May 18, 2:45–3:45 p.m., Esplanade 303.

BOF-1234 | JSR-291: Dynamic Component Support for the Java™ SE Platform

BJ Hargrave and Jim Colson, IBM, and Richard Hall, LSR-IMAG. Thursday, May 18, 10:30 a.m., Esplanade 302.

REPEAT SESSIONS

LAB-5655 | Building AJAX-based JavaServer™ Faces Web Applications With Sun Java™ Studio Creator

Hands-on Lab • TOOLS

This lab shows how to use the Sun Java™ Studio Creator IDE to combine Asynchronous JavaScript technology and XML (AJAX) interactions with JavaServer™ Faces technology to create dynamic web applications to provide realtime feedback similar to interactive desktop applications. *Matthew Bohm, Jayashri Visvanathan, and Chris Kutler, Sun Microsystems, Inc. Wednesday, May 17, 8:35–9:50 p.m., Hall E 130/131.*

LAB-7160 | Simplified Development of Wireless Sensor and Actuator Applications Using Java™ Technology

Hands-on Lab • COOL STUFF

The possibilities and potential applications for wireless sensors and actuators are limited only by the imagination, however, current state-of-the-art requires developers to program in low-level languages with little or no debugging support while running on device. *David Simmons, Eric Arseneau, Cristina Cifuentes, and Derek White, Sun Microsystems, Inc. Wednesday, May 17, 9:50–11:20 a.m., Hall E 130/131.*

LAB-4335 | Developing Interoperable Next Generation Web Services with Project Glassfish™, NetBeans™ IDE and WSIT

Repeating Wednesday, May 17, 7:20–8:20 p.m., Hall E 130/131.

TS-3396 | Enterprise JavaBeans™ 3.0

Java EE • Core Enterprise

Repeating Thursday, May 18, 12:15–1:15 p.m., Hall E 134.

SCHEDULE CHANGES

TS-4069 | Travel Web Services: Marrying Business Innovation with Java™ Technology

Old schedule: *Tuesday, May 16, 2–3 p.m.*
New schedule: *Tuesday, May 16, 3:15–4:15 p.m., North Meeting Room 120/121*

TS-3576 | Visual Basic and the Java™ Platform

Old schedule: *Thursday, May 18, 1:30–2:30 p.m.*
New schedule: *Thursday, May 18, 9:45–10:45 a.m., North Meeting Room 120/121.*

CANCELLED SESSION

BOF-2277 | Using JSR-226 (SVG) and JSR-239 (OpenGL® ES) to Create Compelling Mobile Applications That Combine 2-D and 3-D Graphics

Scheduled *Wednesday, May 17, 9:30–10:20 p.m.*

PRESENTATION THEATER UPDATES

Tuesday, May 16, 12–12:20 p.m.
Oracle's Contribution to the Open Source Community
Omar Tazi, Chief Source Evangelist, Oracle

Tuesday, May 16, 4–4:50 p.m.
Duke's Choice Award Ceremony

Tuesday, May 16, 5:30–5:50 p.m.
Evolving Java™ Technology Through Community Participation and Collaboration
Heather VanCura, Manager, (JCP™) Program Office, Sun Microsystems, Inc.

CORRECTION

Wednesday, May 17, 1:30–1:50 p.m.
Duke's Choice Award Winner:
flurrymail

EXHIBITOR UPDATES

ajile Systems, Inc.
920 Saratoga Avenue, Suite 209
San Jose, CA 95129
408-557-0829 | www.ajile.com

Booth 1422

ajile Systems develops, manufactures and markets a family of low power, direct execution Java™ technology processors, embedded with real-time kernel and Java technology OS based on the Sun Microsystems Java ME™ platform.

MetaMatrix, Inc.
1601 Trapelo Road, Suite 140
Waltham, MA 02451
800-734-1630 | www.metamatrix.com

Booth 416

MetaMatrix is the leading provider of data services management software that makes dis-

tributed information accessible and manageable, breaking through traditional barriers of location, structure, semantics, and context. MetaMatrix is in use at organizations like Merrill Lynch and the Defense Information Systems Agency.

JackBe
4600 North Park Avenue, Suite 200
Chevy Chase, MD 20815
240-722-7620 | www.jackbe.com

Booth 517

JackBe provides complete enterprise AJAX solutions that dramatically improve the usability and productivity of web applications. Our world-class AJAX products, proven Ready/Set/Go methodology and expert consulting services deliver the business benefits of AJAX with minimum risk and the fastest time-to-market.

Amazon.com
1200 12th Avenue South, Suite 1200
Seattle, WA 98144
206-266-1000 | www.amazon.com

Booth 1619

Amazon.com, a Fortune 500 company based in Seattle, opened on the world wide web in July 1995 and is now the world's leading ecommerce technology company. Amazon.com seeks exceptionally well-qualified candidates and offers competitive compensation and benefits.

SMS.ac
255 G. Street, Suite 723
San Diego, CA 92101
619-696-1159 | www.sms.ac

Booth 1634

SMS.ac is the world's largest mobile community and marketplace, meshing together a growing, interactive society of 50 million members in 180+ countries with hundreds of mobile operators to create a global wireless communications network for the exchange of information, products and services. To view the SMS.ac corporate web site, visit www.sms.ac/corporate.

Palantir Technologies
Palo Alto, CA
650-380-1446 | www.palantirtech.com

Booth 438

Palantir enables professionals to visualize and interact with vast amounts of structured and semi-structured data in new ways. Palantir is backed by some of the world's top entrepreneurs, and does exciting work with multi-billion dollar hedge funds and global intelligence organizations.

Axalto Inc
512-257-3900 | www.axalto.com
8311 North FM 620 Road, Austin, TX 78726

Booth 1521

Axalto, world leading provider of micro-processor cards, innovates to make interactions with the digital world more personalized, protected and simple to use. With activities across telecommunications, finance, retail, transport, entertainment, healthcare, personal identification, information technology and the public sector.

Opera Software
47 2416 4000 | www.opera.com
Waldermar Thranes gt 98 PB 2648 St.
Hanshaugen 0131 Oslo, Norway

Booth 316

Opera Software is a global leader in web browser technologies for PCs, mobile phones, and other devices. With Opera Mini, the web browser for low- and mid-range handsets, Opera is now bringing the Internet to the world's 700 million Java™ technology-enabled phones.

STARTUPS

IS Squared 1616
SolovatSoft 1616
Kallisto Productions, Inc. 1616

BOOTH CORRECTION

Fiorano Software Inc. 538

Java Real-Time System Programmer's Challenge

in the Experience the Power of Java Area of the Pavilion

Have fun and learn how easy it is to use real-time Java technology by developing a control application to guide a slot car around a large race track. Participants will take real-time inputs to recognize the car's location on the course and set the speed of the car accordingly. Fastest lap times win great prizes!

WELCOME

Continued from page 1

Java technology's 11th year as a platform and language. And this year's event promises to be more exciting than ever. Whether you're new to the conference or an alumni, you're going to see firsthand the power and breadth of Java technology. You'll have the opportunity to meet industry experts, network with peers, and get hands-on experience with new Java tools and technologies. Plus, there are hundreds of expert-led, in-depth technical sessions where you'll be able to discover the latest in Java innovations.

For example, you'll learn about the new Java Platform, Enterprise Edition 5 (Java EE), which represents the most significant update to the enterprise Java platform in years. The new ease-of-development features in the Java EE 5 platform are designed to enable developers to get more accomplished in less time and reduce the complexity of the code they produce.

Or you'll learn about Java Platform, Standard Edition (Java SE) 6, the next major release and first "feature complete" version of the Java SE platform. It's in beta release now, soon to be available, and is the result of unprecedented levels of collaboration between Sun engineers, registered researchers, and the overall Java community.

In addition to the wealth of learning opportunities available, a few of this year's event highlights include the following:

- Java UniversitySM Program—Attend one-day

courses created and delivered by Sun certified instructors.

- The JavaOne Pavilion—Compare and contrast Java technology-based solutions from more than 90 companies.
- Duke's Choice Awards—Celebrate extreme innovation using the Java platform.
- NetBeansTM Software Day—Learn what's happening with the NetBeans IDE and platform.
- Collaboration Corners—Meet with your peers to share common interest and solutions.

At Sun, we believe that sharing ideas, expertise, and technology fosters participation and innovation. That's why, right from the start, we shared Java with the worldwide community to create new opportunities and drive new markets. And that's also why we created the JavaOne conference.

JavaOne is for developers who use Java technology to inspire thought, drive innovation, and create new possibilities. It's your conference. I'm confident that you'll find this year's event a rewarding experience. And I'd like to thank you for being part of the Java community and for helping make Java technology what it is today.

Enjoy the Conference!

Jonathan Schwartz
President and Chief
Executive Officer
Sun Microsystems, Inc.



JavaOne

NETBEANS

Continued from page 9

The sessions were divided in two tracks: Track A gave an exhaustive overview of SOA, enterprise, and mobile application development, as well as interoperability of enterprise features (Project Tango). Track B zoomed in on building user interfaces and client applications, covering development tools for Java EE and Java Platform, Standard Edition (Java SE), as well as for the NetBeans platform and the new Realtime Java Plug-in. The speakers also answered burning questions from the audience.

In the afternoon, the attendees reassembled for the closing keynote by "the father of Java," James Gosling. Gosling has initiated the Jackpot project and has worked on the Real-Time Specification for Java (RTSJ). The current chief technology officer of

Sun's Developer Products group had the honor of awarding four members of the NetBeans community with a certificate and a Sun Ultra 20 workstation, in recognition of their outstanding contributions to the ongoing project. Congratulations to Wade Chandler, Ramon Ramos, David Strupl, and Tom Wheeler!

This day went by much too soon. But attendees took home more than just the impressions of the energetic music clip featuring shots of developers from all the world tour locations. NetBeans Software Day was an excellent opportunity for everyone to tap into the collective brainpower of Java technology luminaries and fellow developers. And award winners weren't the only ones to go home with a little something extra in their conference backpacks: The first 400 attendees through the door received a free copy of the new *NetBeans IDE Field Guide* (second edition) and a 256 MB USB drive. ■

Book Signing Schedule, Tuesday, May 16

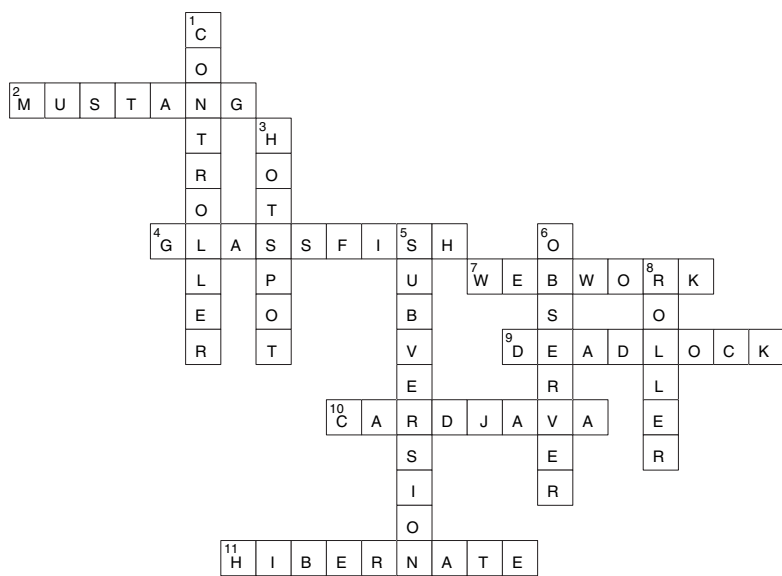
Time	Author	Book Title	Publisher
11-11:30 a.m.	Scott Davis	<i>JBoss at Work</i>	O'Reilly
12:30-1 p.m.	Christopher Webster and Charlie Hunt	<i>NetBeans™ IDE Field Guide, Second Edition (New Launch)</i>	Prentice Hall
1-1:30 p.m.	James Elliott	<i>Hibernate: A Developer's Notebook</i>	O'Reilly
1:30-2 p.m.	Bill Burke	<i>Enterprise JavaBeans 3.0, 5E (Brand-New Book Launch)</i>	O'Reilly
3-3:30 p.m.	Barry Budd	<i>Java 2 For Dummies (second edition)</i>	Wiley
5-5:30 p.m.	Brian Goetz, David Holmes, and Joshua Bloch	<i>Java Concurrency in Practice (Brand-New Book Launch)</i>	Addison-Wesley

Visit the Bookstore and get a FREE Sun Microsystems Press (SMP) or Java Series book when you buy 2 SMP or Java Series titles of equal or higher value. Look for titles that feature the Sun logo, including books in the Prentice Hall Sun/Core Series, and the Addison-Wesley Java Series. While supplies last!

New for 2006: Collaboration Corners on the Pavilion Floor

Got a great idea? Need to solve a specific development problem? Come to the Collaboration Corners located on the Pavilion floor. These special areas give you the opportunity to share ideas, collaborate with fellow developers, and work out your next big challenge.

Answers to TODAY's Crossword Puzzle



Answers to TODAY's Sudoku Puzzle

8	5	7	2	1	3	6	4	9
3	9	1	4	5	6	8	2	7
4	6	2	9	8	7	3	5	1
9	8	3	1	6	2	4	7	5
5	1	4	7	9	8	2	6	3
2	7	6	5	3	4	1	9	8
7	3	8	6	4	5	9	1	2
1	4	5	8	2	9	7	3	6
6	2	9	3	7	1	5	8	4



Service Oriented Business Integration

Integration services are at the heart of any Service Oriented Architecture. Integration solutions have traditionally required the use of non-standard technologies to create functional systems. Java™ integration efforts are focused at standardizing the core architectural elements of an integration architecture.

Project Open-ESB, initiated by Sun™, is an open community effort to create an open source service bus leveraging the latest industry standards such as Java Business Integration (JSR208). This project provides developers the opportunity to collaborate within the projects and contribute to defining the next generation of OPEN enterprise service bus, releasing the shackles of existing proprietary solutions. For more information, please visit: <http://open-esb.dev.java.net>.

Java Business Integration (JBI) specification (JSR 208) defines the core of a service oriented integration bus and component architecture for SOA. It standardizes the common message routing architecture, plug-in interfaces for service engines and bindings, and a mechanism (Composite Service Description) to combine multiple services into a single executable and auditable unit of work. For more information, please visit: <http://java.sun.com/integration>.

At the Pavilion

Sun

Java Business Integration (JBI) Community
- Pod #746

Project Open Enterprise Service Bus (Open ESB) and Open Integration Community
- Pod #744

Sun Java Composite Application Platform Suite
- Pod #704

Partners

Fair Isaac Corporation
- Booth #1312
JBoss, Inc. - Booth #768
LogicBlaze, Inc. - Booth #202
TIBCO Software, Inc.
- Booth #422

Learn more about Java™ and integration services

Plan to attend one or more of the following tech sessions to learn more about Java and integration services:

TS-2002 What Is Happening with SOA in Open Source (panel)
Tuesday, May 16, 3:15 p.m. - 4:15 p.m.

BOF-0089 What's Next for Java Business Integration (JBI)?
Wednesday, May 17, 9:30 p.m. - 10:30 p.m. (Come by and see the BOF and receive a free gift.)

TS-3175 Building a Web Service with BPEL and Java EE Platform
Thursday, May 18, 1:30 p.m. - 2:30 p.m.

TS-1076 Practical SOA Business Integration Using OpenESB
Thursday, May 18, 4:00 p.m. - 5:00 p.m.

JBI Community Continues to Grow

The JBI community continues to grow, with the following companies:

AC Corporation	Fair Isaac Corporation	LOCHERT	Pervasive	Synoptica Limited
Active Endpoints	I.D.I Technologies	LogicBlaze, Inc.	Polar Lake	SYSTEMA Computer
Applation, LLC	Indorion, Inc.	May Consulting Corp.	Prima Solutions	Solutions Corp.
Cap Gemini	Intalio, Inc.	Merge3 Technologies	Prometheus	TIBCO Software
Cape Clear	Integer Software	Group, LLC.	Technologies, LLC	Trace Financial
Chana Cohen Systems Ltd.	Solutions Pvt Ltd	Nordija A/S	Psion Teklogix, Inc.	Yaaman, Inc.
Consulting an Enterprise	IONA Technologies	Optimal Solutions	Sonic Software	
Integrations S.A de C.V	JBoss, Inc.	Pardus d.o.o.	Sun Microsystems	

For more information on the JBI community or to join the Sun Partner Advantage JBI Offering, please visit: www.sun.com/partners/JBI



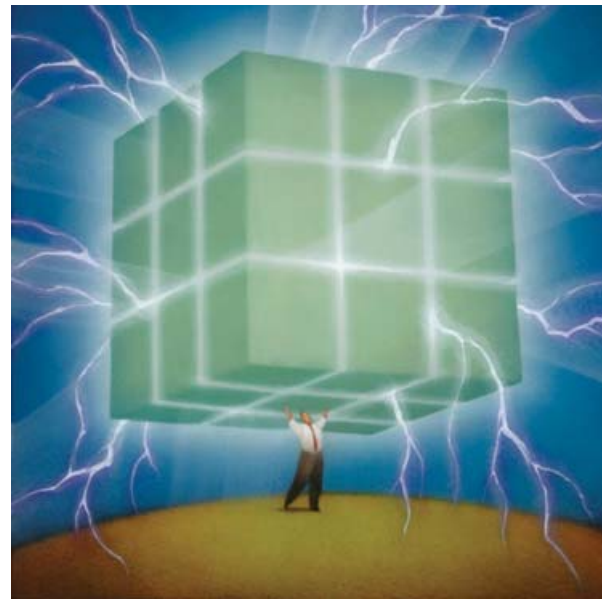
Sun Microsystems, Inc. 4150 Network Circle, Santa Clara, CA 95054 USA Phone 1-650-960-1300 or 1-800-555-9SUN Web [sun.com](http://www.sun.com)

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Innovations by InterSystems



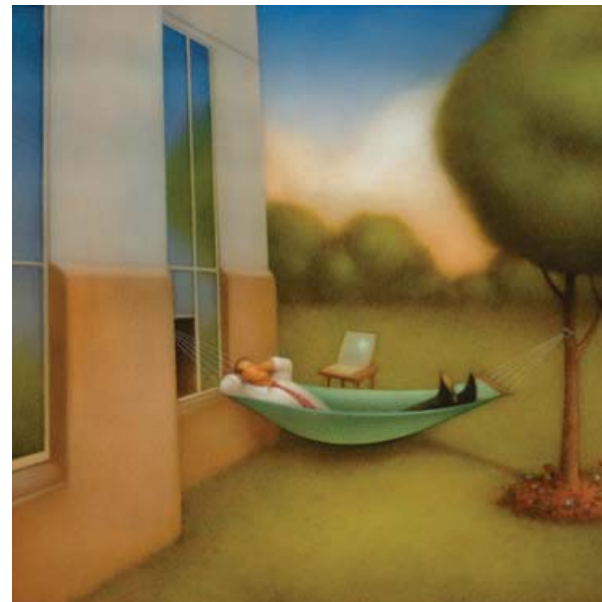
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Massive scalability on minimal hardware



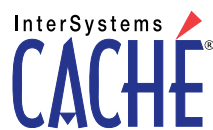
Object-relational mapping eliminated

Object Database That Runs SQL Faster Than Relational Databases.

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