

# Research Triangle Software Symposium 2006

Marriott Research Triangle Park - Raleigh, NC

June 09 - 11, 2006

(session agenda as of 6/7/2006)

| Friday, June 9  |  |  |   |   |  |
|-----------------|--|--|---|---|--|
|                 | 1  | 2  | 3   | 4   | 5  |
| 12:00 - 1:00 PM | REGISTRATION   |  |   |   |  |
| 1:00 - 1:15 PM  | WELCOME  |  |   |   |  |
| 1:15 - 2:45 PM  | JavaScript Exposed: There's a Real Programming Language in There! (Part 1)<br>Glenn Vanderburg | Spring Fundamentals<br>Stuart Halloway         | Practices of an Agile Developer<br>Venkat Subramaniam               | JavaServer Faces: A Whirlwind Tour<br>David Geary | The State of AOP<br>Ramnivas Laddad                        |
| 2:45 - 3:15 PM  | BREAK  |  |   |   |  |
| 3:15 - 4:45 PM  | JavaScript Exposed: There's a Real Programming Language in There! (Part 2)<br>Glenn Vanderburg | Spring Dependency Injection<br>Stuart Halloway | Refactoring your code - a key step in agility<br>Venkat Subramaniam | JSF: State of the Art<br>David Geary              | Enterprise AOP with AspectJ<br>Ramnivas Laddad             |
| 4:45 - 5:00 PM  | BREAK  |  |   |   |  |
| 5:00 - 6:30 PM  | Java Performance Myths<br>Glenn Vanderburg   | Ajax Architecture<br>Stuart Halloway           | Open Source Tools for Agile Development<br>Venkat Subramaniam       | Shale: Turbo-charge your JSF Apps<br>David Geary  | Testing Strategies for Web Applications<br>Ramnivas Laddad |
| 6:30 - 7:15 PM  | DINNER   |  |   |   |  |
| 7:15 - 8:00 PM  | KEYNOTE by Dave Thomas entitled "Cargo Cults & Angry Monkeys"                                  |  |   |   |  |

| Saturday, June 10 |  |  |   |  |  |
|-------------------|--|--|---|--|--|
|                   | 1  | 2  | 3   | 4  | 5  |
| 8:00 - 9:00 AM    | BREAKFAST  |  |   |  |  |
| 9:00 - 10:30 AM   | Where Agile meets Argyle: New processes in established companies<br>Bruce Tate | Introduction to Hibernate<br>Justin Gehrtland  | Ruby for Java Programmers<br>Dave Thomas      | Working with Rules Engines<br>Venkat Subramaniam | Performance Monitoring in J2EE Applications<br>Ramnivas Laddad               |
| 10:30 - 11:00 AM  | BREAK  |  |   |  |  |
| 11:00 - 12:30 PM  | What's New in Spring 2<br>Bruce Tate   | Advanced Hibernate<br>Justin Gehrtland         | Ruby on Rails<br>Dave Thomas                  | Killer Web UIs<br>David Geary                    | Creating, Telling, and Tracking User Stories<br>David Hussman                |
| 12:30 - 1:15 PM   | LUNCH  |  |   |  |  |
| 1:15 - 2:15 PM    | BIRDS OF A FEATHER SESSIONS  |  |   |  |  |
| 2:15 - 3:45 PM    | Three Technologies to Watch<br>Bruce Tate                                      | Spring Security with ACEGI<br>Justin Gehrtland | Testing your Rails Application<br>Dave Thomas | Ajaxian Faces<br>David Geary                     | #Show Me the Numbers# - Agile Planning Tools and Techniques<br>David Hussman |
| 3:45 - 4:00 PM    | BREAK  |  |   |  |  |
| 4:00 - 5:30 PM    | Effective Teams: The dirty little secret<br>Bruce Tate                         | Spring AOP<br>Justin Gehrtland                 | Using Ajax with Ruby on Rails<br>Dave Thomas  | The Productive Programmer<br>Neal Ford           | Losing Battles and Winning Wars: Adopting Agile<br>David Hussman             |

| Sunday, June 11  |                                       |  |  |   |  |
|------------------|---------------------------------------|--|--|---|--|
|                  | 1                                     | 2  | 3  | 4                                       | 5  |
| 8:00 - 9:00 AM   | BREAKFAST                             |  |  |   |  |
| 9:00 - 10:30 AM  | The Agile Enterprise<br>David Hussman | EJB 3 Part 1: Core Spec and Spring Comparison<br>Mark Richards | NetKernel : XML Processing for the 21st Century<br>Brian Sletten   | Holistic Testing<br>Scott Davis         | Extend the Customization Possibilities of Your Java App with Scripts<br>Ted Neward |
| 10:30 - 11:00 AM | BREAK                                 |  |  |   |  |
| 11:00 - 12:30 PM | Refactoring Your Wetware<br>Andy Hunt | EJB 3 Part 2: Java Persistence API (JPA)<br>Mark Richards      | Introducing the Semantic Web<br>Brian Sletten                      | Guerrilla Web Techniques<br>Scott Davis | Effective Enterprise Java: State Management<br>Ted Neward                          |
| 12:30 - 1:15 PM  | LUNCH                                 |  |  |   |  |
| 1:15 - 2:00 PM   | EXPERT PANEL DISCUSSION               |  |  |   |  |
| 2:00 - 3:30 PM   | Pragmatic Learning<br>Andy Hunt       | Understanding the Role of an ESB<br>Mark Richards              | Software Tools That Make Life Easier: Part One<br>Jared Richardson | Real World Web Services<br>Scott Davis  | Pragmatic XML Services<br>Ted Neward   |
| 3:30 - 3:45 PM   | BREAK                                 |  |  |   |  |
| 3:45 - 5:15 PM   | Testing with Selenium<br>Neal Ford    | Java EE Command Pattern Architecture<br>Mark Richards          | Software Tools That Make Life Easier: Part Two<br>Jared Richardson | Scaling Agility<br>Ryan Shriver         | Java5: The Language, The Libraries, The VM<br>Ted Neward                           |

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## **Refactoring Your Wetware by Andy Hunt**

Software development happens in your head; not in an editor, IDE, or design tool. We're well educated on how to work with software and hardware, but what about wetware -- our own brains?

## **Pragmatic Learning by Andy Hunt**

How you learn new technology and acquire new skills is key to your personal success. But how do you learn how to learn? What tricks tips can you use to learn more faster, and retain more of what you learn?

## **NetKernel : XML Processing for the 21st Century by Brian Sletten**

A wise man once said, "XML is like lye. It is very useful, but humans shouldn't touch it." If you've had to incorporate XML into your project by hand, you have probably been burned by getting too close. NetKernel turns this wisdom on its head and encourages you to use XML like the liquid data stream you want it to be. Imagine the simplicity of REST married to the power of Unix pipes. Come see how this open source / commercial product built on a compelling modern architecture can be used to create, manipulate and transform XML.

## **Introducing the Semantic Web by Brian Sletten**

Just as the world is feeling comfortable with the Web, Tim Berners-Lee et al inform us that what we have seen so far is just the beginning. His original plans at CERN were larger and grander. The Semantic Web is the new vision of machine-processable documents and metadata to improve search, knowledge discovery and data integration and management. While there are many naysayers chiding such grand visions, there are also pragmatic and useful technologies emerging that can be applied today.

## **Where Agile meets Argyle: New processes in established companies by Bruce Tate**

Agile programming is a collection of core principles and techniques that allow software developers to create lighter, more responsive applications, and to have fun doing it. Many established organizations are either openly or sub-consciously hostile to many of the principles of Agile development.

## **Effective Teams: The dirty little secret by Bruce Tate**

Most conferences will try to tell you that the secret to good software development lies with a process, or a technology, or an architecture. Here's a dirty little secret. You can build working software with an outdated two tier architecture, a waterfall process and COBOL. How? By building a great team.

## **Three Technologies to Watch by Bruce Tate**

The state of the art is progressing rapidly, and dynamic languages are driving the revolution. Find out about these topics that will be central to programming. We'll discuss continuation servers, metaprogramming frameworks and functional languages.

## **What's New in Spring 2 by Bruce Tate**

In this session, we'll review the new features of Spring 2.0. If you've been using Spring 1.x, you'll want to hear about the improvements.

## **Using Ajax with Ruby on Rails by Dave Thomas**

Ajax is becoming a requirement for new applications: it creates richer user experiences and more dynamic applications. However, doing Ajax by hand is difficult and error prone. The good news is that if you use Rails, you don't have to do Ajax the hard way.

## **Testing your Rails Application by Dave Thomas**

The Ruby on Rails framework has unit and functional testing baked right in. In this talk we'll see how easy it is to get started with testing in Rails, and we'll explore just how deep the testing support goes.

## **Ruby on Rails by Dave Thomas**

The Ruby on Rails framework has exploded onto the scene over the last few months. Propelled by some genuine benefits, and fueled by a whole lot of controversy, Rails seems here to stay. So, is it a Java killer? (No.) Is it a great way to develop certain classes of web application? (Yes.) Does it really deliver the 10-fold increase in developer productivity that some have claimed? (It depends...)

### **Ruby for Java Programmers by Dave Thomas**

Ruby recently enjoyed its tenth birthday. Instead of cake and candles, the community celebrated by releasing a wave of new libraries and frameworks that make Ruby programming even easier. This talk features some of the best of these, as we explore Ruby.

### **Shale: Turbo-charge your JSF Apps by David Geary**

Struts is the most popular Java-based Web application framework today, but that's rapidly changing. There's a newcomer on the block, a leaner, meaner, better-designed framework loosely based on Struts that's poised to dethrone Struts as the reigning king of Java-based web application frameworks. That framework, of course, is JavaServer Faces. Craig McClanahan, the father of Struts and the co-spec lead for JSF 1.0, has proposed reinventing Struts for Struts 2.0 as a set of services for JSF applications. That new framework, which has no direct ties to Struts as we know it, is called Shale.

### **JSF: State of the Art by David Geary**

In 2005, JSF hit its stride, as evidenced from overwhelming support from both vendors and the open-source community. JSF 1.0 had plenty of holes, but open-source projects have arisen to address those needs. This session takes a look at three of those projects: 

- Tomahawk (MyFaces component library)
- Facelets
- Seam

### **Creating, Telling, and Tracking User Stories by David Hussman**

The participants of this session will become agile customers and product owners, creating stories for project, organizing them into themes, and using them during mock planning activities.

### **The Agile Enterprise by David Hussman**

As with many methodologies, moving agile into larger organizations poses larger challenges. There are many factors outside the developer world that can crash all the benefits of agile without regard to its success.

### **JavaServer Faces: A Whirlwind Tour by David Geary**

JavaServer Faces (JSF) has arrived. The standard Java-based web application framework based on Struts, JSF really took off in 2005. Embraced by developers, vendors, and open-source projects, JSF has started to hit its stride. If you haven't come up to speed on JSF basics, this is the place to start.

### **Losing Battles and Winning Wars: Adopting Agile by David Hussman**

Adopting agile is different for each company, but most companies will go through some amount of change during the adoption of agile.

### **Killer Web UIs by David Geary**

User interfaces are usually the most turbulent aspect of an application during development. Constant tinkering with the UI means constant changes to your code, so as a UI developer, you want to minimize the scope and effects of those code changes. Open-source Java provides two powerful software packages that help you manage UI complexity: Tiles and Sitemesh. Tiles composes webpages from discrete regions of your user interface known as tiles. A tile contains a JSP page for layout and one or more JSP pages for content. Sitemesh decorates webpages with decorators that can be associated with URL patterns. Once you set up your decorators, you can decorate pages that match a decorator's URL pattern.

### **#Show Me the Numbers# - Agile Planning Tools and Techniques by David Hussman**

This session will focus on tools and techniques for tracking an agile project plan from creation to project completion.

### **Ajaxian Faces by David Geary**

JavaServer Faces is a perfect platform for implementing Web 2.0 interfaces with Ajax. This session explores how you can use these two potent technologies--JSF and Ajax--together to create applications that look and behave like desktop applications but run in the browser.

### **JavaScript Exposed: There's a Real Programming Language in There! (Part 1) by Glenn Vanderburg**

With the sudden importance of Ajax, it's time to take JavaScript seriously. That means learning it the right way: looking at the fundamentals of the language and surveying its strengths and weaknesses, instead of just copying other people's poorly written examples.

### **JavaScript Exposed: There's a Real Programming Language in There! (Part 2) by Glenn Vanderburg**

Building on part 1, this talk dives deep into JavaScript's object model. We'll see how it differs from more

mainstream object-oriented languages, and why. We'll explore how to hide some of those differences, as well as the reasons you might not want to. Additionally, we'll cover useful tools for JavaScript testing, debugging, and profiling.

### **Java Performance Myths by Glenn Vanderburg**

Performance myths about the Java platform abound, from the general "Java is slow", to the more specific "reflection is slow", "allocation is slow", "synchronization is slow", "garbage collection is slow", etc. Many of these myths have their root in fact (in JDK 1.0, everything was slow); today, not only are many of these statements not true, but Java performance has surpassed that of C in many areas, such as memory management.

### **Software Tools That Make Life Easier: Part One by Jared Richardson**

a.. Do you spend more time fighting your tools than writing code? b.. Do you avoid merging your code with your teammates because of #Integration Hell#? c.. Do the same bugs keep sneaking back into your product? d.. Do your builds depend on the roll of the dice? A good set of infrastructure tools can go a long way toward smoothing out these and other problems. Come see how to make your toolset work seamlessly in the background so you can Just Work. We'll cover source code management (SCM), build scripts, automated test harnesses, automatic builds, feature tracking and issue tracking.

### **Software Tools That Make Life Easier: Part Two by Jared Richardson**

This talk is a continuation of Part One of the Tools talk. During Part Two we'll cover Continuous Integration, automated testing, bug tracking, and feature tracking.

### **Spring AOP by Justin Gehrtland**

Learn to use Spring AOP, aspect injection. and AspectJ integration. Spring provides powerful support for Aspect-Oriented Programming (AOP), via Spring Advisors Dependency Injection for Aspects Integration with AspectJ

### **Advanced Hibernate by Justin Gehrtland**

Hibernate is easy to get started with, but can sometimes be hard to make efficient or secure. In fact, the default settings for Hibernate create applications that will run slowly, cause unwanted round trips to the database, and may be more restrictive and/or permissive from a security standpoint than you would otherwise want.

### **Introduction to Hibernate by Justin Gehrtland**

O/RM (Object/Relational Mapping) seeks to eliminate repetitive or tedious work enabling the CRUD (create, read, update, delete) that underlies most applications. Hibernate is a popular, open-source O/RM tool that uses reflection (instead of code generation, like EJB, or bytecode injection, like JDO) to manage your persistence layer. This session will introduce you to Hibernate. After an overview of common usage scenarios, including web and enterprise applications, we'll examine the basics of getting Hibernate running. We'll cover the mapping file format and syntax, including common relational mapping structures. Then, we'll examine the Hibernate API for interacting with the framework. Finally, we'll cover the common architectural decisions you'll have to make as you include this (or any other) O/RM framework.

### **Spring Security with ACEGI by Justin Gehrtland**

Spring offers developers a simpler, more robust method for configuring applications. These benefits extend to security through the ACEGI framework. ACEGI makes the otherwise daunting task of securing your application logical and straightforward. More importantly, through its support for single sign-on provision through Yale's CAS system and its ability to provide instance-level authorization, Spring extends the common security model of most J2EE apps beyond what they are traditionally capable of.

### **EJB 3 Part 2: Java Persistence API (JPA) by Mark Richards**

In addition to providing a simplified API, the new EJB 3 specification (JSR-220) defines a standard ORM Java Persistence API (JPA) that replaces those nasty Entity Beans that were part of the EJB 2.x specification. As you will see in this session, JPA bears a striking resemblance to popular ORM solutions like Hibernate and Toplink. In this session we will explore in detail the new Java Persistence API offered by JSR-220. We will start by discussing the overall design and architecture of the JPA and how the major components within JPA interact. We will then look at defining mapping objects (entities) and how to use the EntityManager to manage these entities. Through interactive coding examples we will see how to use the JPA for simple queries, complex queries, and finally stored procedures. This session is part two of a two-part EJB 3 session.

### **Understanding the Role of an ESB by Mark Richards**

The Enterprise Service Bus is an integral part of any Service-Oriented Architecture. It is the glue that binds the business services to the client applications. There are many ESB third-party products and solutions in the marketplace, but in most cases these products only serve to further confuse us in terms of what an ESB is, particularly when you consider that an ESB is really an architectural component that has many different implementations. In this session we will take a detailed, product-agnostic look at the role of an ESB and the capabilities an ESB must provide. Through this session you will learn what an ESB is, the role of an ESB, what capabilities it provides, and the various ways an ESB can be implemented. We will also take a close look at the Java Business Integration (JBI) specification (JSR-208) and see what impact it will have with the ESB world. With the information from this session you will learn how to determine your own specific requirements for an ESB and then match those requirements to the product space rather than having the tail wag the dog!

### **Java EE Command Pattern Architecture by Mark Richards**

Tired of dealing with EJBs but cannot use other frameworks like Spring? How would you like to replace all of your remote Stateless Session Beans with POJOs and still access them remotely within Java EE? By using the Java EE Command Pattern we can write EJBs as POJOs and solve many of the issues facing EJB, including testability, configuration complexity, and performance, and still remain within our behemoth Java EE environment. The Java EE Command Pattern is a simple pattern that can significantly reduce the complexity of large-scale Java EE enterprise applications. In this session we will explore the numerous issues facing a typical EJB architecture and learn how the use of the Java EE Command Pattern can solve these issues. We will walk through the different design alternatives and see how the command pattern is implemented. Through interactive coding examples you will learn what components make up the Command Pattern framework and what simple coding changes are required to convert a complex EJB-based application to a remotable POJO-based application.

### **EJB 3 Part 1: Core Spec and Spring Comparison by Mark Richards**

The new EJB 3 specification (JSR-220) offers some great improvements over the prior EJB specs in terms of development simplicity and new features. In this session we will explore in detail some of the new features of the core EJB 3 specification. Included in this session will be defining and accessing session beans, JTA transaction management, declarative security, and interceptors. During the session I will demonstrate the new features of EJB 3 through interactive coding examples. We will then look at how the EJB 3 specification differs from the Spring Framework, where each is useful, and speculate as to what will happen in the future with these two frameworks. This session is part one of a two-part EJB 3 session (part two covers the new Java Persistence API).

### **The Productive Programmer by Neal Ford**

This session shows you how to become a more productive programmer every day by using tools that you didn't know you already had.

### **Testing with Selenium by Neal Ford**

This session describes the use and workings of Selenium, the open source web user interface testing tool.

### **Performance Monitoring in J2EE Applications by Ramnivas Laddad**

J2EE has become the main new platform for enterprise application deployment. Good performance is an important business requirement. Supporting this requirement needs application profiling during the development phases and performance monitoring after application deployment. Come to this session to understand challenges and choices in monitoring J2EE applications.

### **Enterprise AOP with AspectJ by Ramnivas Laddad**

Enterprise application development is a gold mine for applications of AOP. There are many crosscutting concerns found in a typical enterprise application, ranging from well-known security and transaction management to application- and technology-specific concerns. Using AOP leads to implementations that are easy to understand and easy to change.

### **Testing Strategies for Web Applications by Ramnivas Laddad**

Ever wondered if you can automate testing of your web application, but couldn't produce a satisfactory solution? If so, this is the session for you! Attend this session to understand the alternatives you have for unit and functional testing of web applications.

### **The State of AOP by Ramnivas Laddad**

A lot is happening in the field of Aspect-oriented programming (AOP). AspectJ and AspectWerkz, the two

leading AOP implementations, have merged, bringing in their respective strengths. The merged version, AspectJ 5, adds many new features aimed at simplifying writing and deploying aspects. The new features include an annotation-based and XML-based syntax to define aspects, support for new Java 5 concepts, and load-time weaving. The tools support for AOP continues to improve, as well. Further, the most popular IOC framework, Spring, enables integrating aspects written in AspectJ. There is also serious discussion and preliminary work going on to support AOP right into the VM itself. All in all, there is a lot to learn about the changes in the exciting field of AOP. This session is designed to help you get up to date with all these changes.

### **Scaling Agility by Ryan Shriver**

Scaling Agility is a case study in leveraging Agile practices for larger-scale software product development.

### **Holistic Testing by Scott Davis**

Mark Twain once said, "Everyone talks about the weather, but nobody does anything about it." Do you feel the same way about Unit Testing? Are you actively testing your code, or are you just thinking about testing your code... some day... once you get some more free time...

### **Guerrilla Web Techniques by Scott Davis**

Frameworks? We don't need no stinkin' web frameworks. OK, so maybe that's overstating the case. Web frameworks do plenty of good things, but sometimes they can also be golden handcuffs. Too many web developers fall into the trap of thinking, "If it can't be done by my web framework, then it simply can't be done."

### **Real World Web Services by Scott Davis**

In this talk, we'll survey the web services exposed by leading websites (Google, Yahoo, Amazon, eBay) and discuss how they are driving the AJAX revolution. You'll see examples of RESTful, SOAP, and JSON web services, as well as the strengths and weaknesses of each.

### **Spring Fundamentals by Stuart Halloway**

The Spring framework is one of the fastest growing open source frameworks. New job postings are gaining rapidly, and many customers are adopting Spring instead of heavier alternatives. In this session, we'll introduce Spring. You'll see how Spring can give you much of the power of EJB, without the complexity or pain.

### **Ajax Architecture by Stuart Halloway**

Ajax applications have unique architectural challenges and opportunities. This presentation will show you how to take advantage of the Ajax's strengths, and work around its quirks.

### **Spring Dependency Injection by Stuart Halloway**

Dependency Injection (DI) is the cornerstone of Spring. The core concept is quite simple, but (surprise!) actual practice can become complex. To take full advantage of Spring DI, you need to understand not only the basics on configuration, but also the container lifecycle model and the various hooks provided by the framework.

### **Pragmatic XML Services by Ted Neward**

There's a lot of talk about web services, and most of it falls into one of two categories: lots of low-level talk about vendor-specific tools and extensions, or lots of high-level talk that never shows you a line of code. XML services aren't that hard, and in this talk, we'll see how, why and when to do one.

### **Java5: The Language, The Libraries, The VM by Ted Neward**

Java5 introduced a whole slew of new features, including annotations (JSR 175), new language features (the enhanced for loop, generics, static imports, and more), new library support (java.lang.instrument, among others), and some interesting enhancements to the virtual machine itself.

### **Extend the Customization Possibilities of Your Java App with Scripts by Ted Neward**

Ever wished you could just put parts of your program in end-users' hands and let them build the infinite little changes they want? Ever thought about how you might make your application more robust by writing less code, not more? Embed a scripting engine into your application--complete with the safeguards necessary to ensure that users can't do anything they shouldn't be able to--and release yourself from the Principle of Perpetual Enslavement.

### **Effective Enterprise Java: State Management by Ted Neward**

Managing state--both transient state (like your shopping cart) and your durable state (like your order placements, your inventory management forms, and so on)--is tricky in an enterprise application. In this talk, we'll examine some of the trickiness, both high-level and low-.

### **Open Source Tools for Agile Development by Venkat Subramaniam**

As a Java developer, you have taken the time to learn the basics of the language and relevant parts of its rich API. However, you need more than that to develop serious industrial strength applications. In this presentation, the speaker will introduce you to a number of open source tools which you can use to improve your application quality and your development process.

### **Refactoring your code - a key step in agility by Venkat Subramaniam**

Refactoring is one of the core practices in Agile Software Development. Refactoring is based on some core principles that apply to more than writing good code. But, what's refactoring? Why should you do it? How do you go about doing that? What tools are available to successfully refactor your App?

### **Working with Rules Engines by Venkat Subramaniam**

Rule based programming allows us to develop applications using declarative rules. These can simplify development in applications where such rules based knowledge is used for decision making.

### **Practices of an Agile Developer by Venkat Subramaniam**

You have worked on software projects with varying degree of success. What were the reasons for the success of your last project? What were the reasons for those that failed? A number of issues contribute to project success - some non-technical in nature. In this presentation the speaker will share with you practices in a number of areas including coding, developer attitude, debugging, and feedback. The discussions are based on the book with the same title as the talk.