4th Annual TCF IT Professional Conference

Friday, April 24, 2009

The College of New Jersey

Sponsored by:

IEEE Region 1

IEEE Princeton/Central New Jersey Chapter

Princeton Joint Chapters of the ACM / IEEE Computer Society

Schedule

	Track	
	Track A Room 210	Track B Room 211
8:00 AM	REGISTRATION	
9:00 AM	Eliminating Cross-Cutting Concerns with Aspect-Oriented Programming Michael Redlich ExxonMobil Research & Engineering	Patents and Business Strategies: A Patent Attorney's Perspective Safet Metjahic McGuireWoods LLP
10:00 AM	Functional Style Programming Barry Burd Drew University	Legal Issues -A Brief Update Frederic Wilf Morgan, Lewis, & Brokius LLP
11:00 AM	Innovations in Software Engineering Education Lawrence Bernstein Stevens Institute of Technology	Who Owns My Creation? Mark Nikolsky McGuireWoods LLP
12:00 PM	LUNCH & NETWORK SESSION	
1:30 PM	Use Cases Tutorial Dennis Mancl Alcatel-Lucent	Survey of Performance Analysis of Servers for Web Technologies Guy Ferraiolo Norstrilia Software, Inc.
2:30 PM	Virtualization VMWare/HyperV James Mikusi Web-Kong.com	Web Efficiency: Using XHTML, CSS, and Server-side to Maximize Efficiency Robert Gezelter Robert Gezelter Software Consultant
3:30 PM	Java Vs .NET Raj Laad Pristine Infotech, Inc.	The Dangers of File Sharing vs. Identity Theft Rebecca Mercuri Notable Software, Inc.

Eliminating Cross-Cutting Concerns with Aspect-Oriented Programming

Michael Redlich
Exxon Mobil Research and Engineering Company

Abstract:
Aspect-Oriented Programming (AOP) is a relatively new paradigm that has evolved from the well-established Object-Oriented Programming (OOP) paradigm. OOP has made a significant impact on how software developers write their applications, but despite all of its benefits, it can suffer from a phenomenon known as cross-cutting concerns. This happens when objects start out as a Plain Old Java Object (POJO) or Java Bean, but eventually gain additional responsibilities such as logging and authentication. These additional responsibilities can ultimately make their way into other related objects. This violates one of the design principles which states, "***A class should have only one reason to change***." This means that a class should only have one, and only one, responsibility. If additional responsibilities are added to a class, then an additional area for change within that class exists. AOP solves this issue of cross-cutting concerns by "weaving" cross-cut code into the application at run time. This allows developers to write one aspect module that can be used in a variety of applications. This seminar will introduce AOP, its related nomenclature, and review a small application that has been refactored using AOP.

Biography:

Michael Redlich is a currently a Senior Research Technician at ExxonMobil Research & Engineering Company in Clinton, New Jersey with extensive experience in developing custom web and scientific laboratory applications.Mike also has experience as a Technical Support Engineer for Ai-Logix, Inc. where he provided technical support and developed telephony applications for customers. He has been a member of the Amateur Computer Group of New Jersey (ACGNJ) since 1996, and currently serves on the ACGNJ Board of Directors as President. Mike has also been facilitating the monthly ACGNJ Java Users Group since 2001. His technical experience includes objectoriented design and analysis, relational database design and development, computer security, C/C++, Java, and other programming/scripting languages. Mike has co-authored a number of articles with Barry Burd for Java Boutique. He has also conducted seminars at Emerging Technologies for the Enterprise, Trenton Computer Festival (TCF) since 1998, TCF Professional Conference since 2006, and other venues including Princeton Java Users Group, Capital District Java Developers Network, and New York Software Industry Association (NYSIA) Java Users Group. Mike serves as a Coordinator of a local ExxonMobil Science Ambassador program where he has conducted numerous science demonstrations and served as a science fair judge for various elementary schools in central New Jersey. Mike holds a Bachelor of Science in Computer Science from Rutgers University.

Functional Style Programming

Barry Burd
Drew University

Abstract:
Most developers are proficient in the imperative style of programming: "Do this; then do that; then do this other thing." The imperative style is so firmly entrenched that many developers aren't even aware of the alternatives. One such alternative is the functional style, in which the programmer defines a collection of starting-value/resulting-value rules, and the language interpreter follows the rules to their logical conclusion. Functional programming focuses on flow rather than system state, which makes it ideal for programming in a multi-core environment. This talk describes the functional style, with examples in Haskell, a mature, elegant functional programming language.

Biography:
Barry Burd is a professor of Computer Science and Mathematics at Drew University in Madison, New Jersey. He's the author of several books, including the textbook Pascal by Example (which is still in print!), the ever-popular Java For Dummies, and Ruby on Rails For Dummies.

Innovations in Software Engineering Education

Lawrence Bernstein
Stevens Institute of Technology

Abstract:
A recent study of software engineering concluded that the professional software engineer should:

1. be able to analyze, design, verify, validate, implement, apply, and maintain a modest-sized software system and understand the challenges of scaling to larger software systems,
2. understand the relationship between software engineering and systems engineering,
3. work effectively as part of heterogeneous team, including teams,
4. reconcile conflicting project objectives,
5. address ethical, social, legal, and economic issues and
6. be able to select new technologies, understanding their limitations and appropriate uses.

While some can disagree on specifics of these objectives,

This talk surveys the current state of software engineering masters degrees and discusses recent work to establish a reference curriculum.

Biography:
Larry Bernstein is the Distinguished Service Professor of Software Engineering at Stevens Institute of Technology.

He wrote Trustworthy Systems Through Quantitative Software Engineering with C.M. Yuhas, Wiley, 2005, ISBN 0-471-69691-9

He is a Fellow of the IEEE and the Association for Computing Machinery for innovative software leadership.

He had a 35-year distinguished career at Bell Laboratories and holds eight software patents.

He is software engineering editor and reviewer for ACMâ€™s Computing Reviews.

Use Cases Tutorial

Dennis Mancl
Alcatel-Lucent

Abstract:
In the world of software development, the technique of writing Use Cases becoming a popular way to analyze and document software requirements. In use case modeling, each major piece of user-visible behavior is described in a scenario-based format. The advantages of use cases over other requirements documentation approaches: the use cases are more compact, better organized, more clearly linked to specific user needs, and easier to evolve as user needs are changing. This talk will be a hands-on tutorial showing the techniques to employ use cases for modeling a wide variety of software systems.

Biography:
Dennis Mancl is a Distinguished Member of Technical Staff with Alcatel-Lucent. He has been doing training and consulting on object oriented programming and design for 20 years, and he has done use cases coaching since 1998.

Virtualization VMWare/HyperV

James Mikusi
Web-Kong.com

Abstract:
Despite being around for quite some time, virtualization has been around for quite some time. This talk will compare the two most prevalent offerings at current, VMWare and MS Server 2008 HyperV. The talk will evaluate what scenarios are eligible for virtualization scenarios and when not to use it. A look will be taken at the feature sets offered including disaster recovery, high availability, and physical to virtual conversion. Installation, configuration, and instantiation of virtual servers will be covered. The attendee will leave with the knowledge necessary to evaluate if virtualization might benefit their organization and how to begin implementation.

Biography:
Mr Mikusi is the owner/operator of Web-Kong.com, an Information Architecture and IT Consulting resource for small businesses. We focus on productivity and efficiency oriented solutions to maximum the benefit from the IT infrastructure. While we offer full spectrum solutions we are GNU/Linux advocates and solution providers.
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Patents and Business Strategies: A Patent Attorney's Perspective

Safet Metjahic
McGuireWoods LLP

Abstract:
Any business plan for a high-tech company should include at least a section addressing the intellectual property (IP) landscape within which the company operates, or is likely to operate, and the companyâ€™s plan for navigating that landscape. This presentation is designed to provide a brief overview of how to go about surveying the landscape and preparing a plan to protect core innovation that is critical to a companyâ€™s growth and/or survival, while avoiding potential land-mines. Some of the strategies to be discussed in the presentation include inventorying a companyâ€™s IP assets, ensuring core IP assets are protected, looking for areas of opportunity, and minimizing exposure to litigation.

Biography:
Mr. Metjahic is a registered patent attorney licensed to practice before the U.S. Patent and Trademark Office. His practice includes patent litigation matters, post-grant exparte and inter-parte Patent Office proceedings, U.S. and foreign patent procurement, technology transfer and client counseling. He has experience in a wide range of technologies, including electronics, electrical, software, telecommunications, business method and mechanical arts.
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Note: May only be available for Saturday & Sunday (not clear in the submittal)

Legal Issues for the IT Professional

Frederic M. Wilf
Morgan Lewis & Brockius LLP

Abstract:
Legal Issues: The courts and the legislators continue to bring us new and different laws and decisions that affect how we may or may not use technology in our lives. Do all businesses have to encrypt personal information of their customers? Can any one who has an iPod or other portable content device place copies of their content in publicly-available folders on the Internet? Do you want all of your health information online? Please bring your questions, and we will see how many of them we can answer.

Biography:
Frederic M. Wilf represents individual and companies for technology, intellectual property and business law matters. He has been speaking at Trenton Computer Festival on the intersection of law and technology since the 1980s. Fred is of counsel at Morgan, Lewis & Bockius LLP in its Princeton and Philadelphia offices. Morgan Lewis (www.morganlewis.com) is a general practice law firm with 1500 lawyers in 22 offices around the world.

Who Owns My Creation?

Mark Nikolsky
McCarter & English, LLP

Abstract:
Entrepreneurs can face the following question while working on technical projects: who owns my creation? Whether the creation is a new device, process, software code, technical documentation, etc., the answer to the question of ownership of rights can be critical to the success of an entrepreneur. In many cases, the answer may not be what is assumed. This talk will explore the legal issues that may be encountered by entrepreneurs, and will offer some suggestions for maximizing protection of rights. It will also provide a brief background of the forms of intellectual property (IP) that may be applicable, with a focus on IP protection of software-related products/services.

Biography:
Mark Nikolsky is a patent attorney at the law firm of McCarter & English, LLP, in Newark, NJ. His practice focuses on the procurement, licensing, and enforcement of intellectual property (IP)rights, including patents, trademarks, copyrights, and trade secrets. He is an alumnus of The College of New Jersey (B.S. in Computer Science), a graduate of Seton Hall University School of Law, and has been practicing IP law for nearly a decade.

Survey of Performance Analysis of Servers for Web Technologies

Guy Ferraiolo
Norstrilia Software, Inc.

Abstract:
This talk briefly surveys current tools, procedures and concepts in the context of achieving significant computer performance improvement. The primacy of concepts and procedures over software tools is a major theme. Although the focus is on web technologies the discussion has general applicability to any performance analysis domain.

Biography:
Guy Ferraiolo has 28 years experience in the software industry. He is currently the president of President, Norstrilia Software, Inc. Previously he was a Principal Software Engineer at CNET Networks, Inc. where he has been a member of the Performance Measurement and Analysis group for 7 years.

Web Efficiency: Using XHTML, CSS, and Server-side to Maximize Efficiency

Robert Gezelter
Robert Gezelter Software Consultant

Abstract:
Being "green" is all the rage. Improving efficiency involves creating a positive feedback loop of reducing the resources needed for each operation.

Many, many web applications make extensive use of server-side, dynamic technologies. Often, far more than is needed. This session will discuss how to leverage of XHTML, CSS, and server-side to reduce bandwidth and processing power at all stages of the pipeline, increasing speed and reducing cost.

Biography:

Our speaker will be Robert Gezelter, a Senior Member of IEEE and an alumnus of the IEEE Computer Society's Distinguished Visitors Program. Mr. Gezelter holds BA and MS degrees in Computer Science from New York University. He is a contributor to the Computer Security Handbook (2009) and the Handbook of Information Security (2005). He has spoken and written extensively on operating systems, networks, performance, security, tools, and similar areas.

Mr. Gezelter is in private practice, and maintains his offices in Flushing, New York. He can be contacted via his firm's www site at http://www.rlgsc.com.

Java Vs .NET

Raj Laad
Pristine Infotech, Inc.

Abstract:
Early environments such as X Windows, OMG's CORBA have disappeared over years and are being replaced by Java and .NET based environments. After a brief history Java and .NET consisting of early days and developments of last few years, this talk will focus on technology and its components of each of Java and .NET. It will describe various architectural blocks and how they interact with each others. Various technologies provided by each such as Directory Services, Remote Objects, Web Services, Software-As-Service, Security, Versioning, etc. will be discussed. In addition, support for latest technologies such as mobile computing, AJAX, etc. will be presented as well. Development and deployment environments of each will be briefly touched upon as well. Some code samples for both environments will be presented. Industry support for these environments will be reviewed. The presentation will finish with a review of what's around the corner for each of these.

Biography:

Raj Laad is the CTO of Pristine Infotech, Inc. where he is spearheading the development of a mobile platform that utilizes the latest features of cellular/WiFi connectivity, GPS/location, camera, Bluetooth, voice, touch, etc. With 25+ years in product and platform development, Raj has always remained in the forefront of Technology such as Java, .NET, X Windows, etc. He has worked with well known technology companies in the Boston area. Raj was the President and CEO of GURU Technology, a consulting company, for several years. Having contributed to the development of early products and platforms from Lotus Development and Informix, Raj possesses deep expertise in employee productivity improvement solutions. He has conceptualized and developed complex distributed real time SOA platforms for Telecomm, Datacomm, Health and Security industries. Raj holds a Masters Degree in Computer Science and Engineering from IIT Bombay.

The Dangers of File Sharing vs. Identity Theft

Rebecca Mercuri, Ph.D.
Notable Software, Inc.

Abstract:
Identity theft is often described as "the fastest growing crime in the USA" but its risks are actually quite small. Per incident losses actually cost the "victim" less than $1,500, and much of this is typically covered by insurance or wavered through credit card deductibles. On the other hand, the dangers resulting from the use of peer-to-peer file sharing can include 6-figure legal bills, incarceration, loss of job and home, and a permanent felony record.
Research has shown that the chance of inadvertent exposure to contraband material via file sharing search engines typically exceeds 30%. Once this material has reached your hard drive, it may be difficult to personally detect or remove it, yet the owner and users can still be accused and convicted of illicit possession as well as distribution.
This talk will present some of the shocking ways that people have found themselves served with a computer-related search warrant, and will provide tips on how to protect yourself, your family, and your business from criminal prosecution resulting from file sharing use.

Biography:

Rebecca Mercuri is a forensic computing expert and the President and CTO of Notable Software, Inc. <http://www.notablesoftware.com>. Since 1998, she has assisted with criminal defense investigations for the NJ Office of Public Defender and on various Federal cases involving murder, financial fraud, child pornography and endangerment allegations. Dr. Mercuri is also well-known for her work in election integrity and recounts, including testimony presented in Bush v. Gore and other disputes.