

# QCon



**SAN FRANCISCO 2012**

Conference: Nov. 7-9 Tutorials: Nov. 5-6

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# Track / Room overview

	WEDNESDAY'S TRACKS	THURSDAY'S TRACKS	FRIDAY'S TRACKS
GRAND BALLROOM A	Big Data and Analytics	Loose Concurrency & CAP theorem today	Architectures you've always wondered about
GRAND BALLROOM BC	Cross Platform Mobile	Taming HTML5 & JavaScript	NoSQL Emergence
BAYVIEW	Realtime Web	Continuous Delivery	The Agile Team Field Guide
SEACLIFF AB	Programmable Web	Tales from Silicon Valley	Dynamic Languages for the Web
SEACLIFF CD	Solutions Track: No SQL	Java Renaissance	Mechanical Sympathy
MARINA	User Experience (UX)	Solutions Track #2	
REGENCY	Solutions Track # 1	Solutions Track: Big Data and Dev Ops	Solutions Track # 3



## Welcome to QCon!

Welcome to the 6th Annual QCon San Francisco. We are truly grateful that you are able to join us. To accommodate the growing numbers of attendees and sponsors QCon this year takes place at Hyatt Regency San Francisco. We hope you will feel comfortable here.

At QCon, our vision is to create the ultimate conference for team leads, architects, and technical project managers. The ultimate conference becomes a reality at QCon as we bring together a diverse range of technical content and speakers who cover timely and relevant topics in enterprise software today.

This guide provides a quick overview of the conference speakers, presentations and schedule and will help you navigate through the three conference days. We hope that it is useful and that you enjoy your QCon experience.

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## REAL SOFTWARE ENGINEERING

Glenn Vanderburg, *LivingSocial*

For over 40 years, starting in the late 1960s, the “Software Engineering” crowd has been telling us programmers that we need to get serious and learn how to be real engineers. Most of their prescriptions resembled what we imagine a civil engineer’s day might be like: lots of formal methods, specification, diagrams and other documents, design analysis and verification, and the like. In software, ironically enough, getting serious about being good engineers requires rejecting almost everything we’ve been taught about Software Engineering. What engineering really means in the context of software is very different from what other engineering disciplines practice.

**Time: Wednesday 09:20am - 10:10am Location: Grand Ballroom**



Glenn Vanderburg

## COOL & USELESS

Kevlin Henney, *Patterns, Programming, Practice and Process*

Just because you can doesn’t mean you should. On the other hand, not everything that is cool and fun is necessarily useful and practical. Programmers and other technical types often enjoy playing with ideas, often for the sheer fun or challenge of it, not because an idea is directly useful or likely to provide meaningful business value to some stakeholder. This talk looks at and celebrates code and other geekish manifestations of things that are cool and useless.

**Time: Wednesday 5:35pm - 6:25pm Location: Grand Ballroom**



Kevlin Henney

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**KEYNOTE: NOSQL: PAST, PRESENT, FUTURE**

*Eric Brewer, VP of Infrastructure at Google, Professor at UC Berkeley*

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There were databases before SQL - the relational model replaced them.

"NoSQL" is not about SQL at all - it is about building bottom-up layered systems following the model of Unix rather than the top-down relational model derived from declarative set operations.

What can we learn from the "pre-SQL" systems' failures and to where must the current NoSQL solutions evolve to address the full range of application needs?

**Time: Thursday 09:20am - 10:10am Location: Grand Ballroom**



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**RACE CONDITIONS, DISTRIBUTION, INTERACTIONS-  
TESTING THE HARD STUFF AND STAYING SANE**  
*John Hughes, Co-designer of Haskell and QuickCheck*

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Even the best test suites can't entirely prevent nasty surprises: race conditions, unexpected interactions, faults in distributed protocols and so on, still slip past them into production. Yet writing even more tests of the same kind quickly runs into diminishing returns. I'll talk about new automated techniques that can dramatically improve your testing, letting you focus on what your code should do, rather than which cases should be tested - with plenty of war stories from the likes of Ericsson, Volvo Cars, and Basho Technologies, to show how these new techniques really enable us to nail the hard stuff.

**Time: Friday 09:20am - 10:10am Location: Grand Ballroom**



9:00 am	Conference Intro and Track Introduction		
9:20 am	Opening Keynote: Real Software Engineering / Glenn Vanderburg		
10:10 am	Break		
ROOM	GRAND BALLROOM A	GRAND BALLROOM BC	BAYVIEW
TRACK	BIG DATA AND ANALYTICS	CROSS PLATFORM MOBILE	REALTIME WEB
HOST	<i>Ken Collier</i>	<i>Maximiliano Firtman</i>	<i>Matthew Eernisse</i>
10:30 am	100% Big Data. 0% Hadoop. 0% Java <i>Pavlo Baron</i>	Multiplatform, promises and mobile HTML5 <i>Maximiliano Firtman</i>	The realtime web: HTML5 WebSockets, Engine.IO, Socket.IO, SPDY, HTTP2.0 & Beyond <i>Guillermo Rauch</i>
11:20 am	Break		
11:40 pm	AppWatch - a big data application monitoring system for eBay <i>Bhaven Avalani &amp; Yuri Finklestein</i>	Building social apps for all mobile platforms <i>James Pearce</i>	Integrating the classic MVC architecture with Real Time <i>Daniel Erickson</i>
12:30 pm	LUNCH is served at Atrium Level (2nd floor)		
1:30 pm	Orbitz Case Study: Extending Enterprise Data Warehouse with Hadoop <i>Robert Lancaster</i>	The Mobile Web Developer's Tool Belt <i>Pete LePage</i>	SocketStream - a new framework for a new web <i>Owen Barnes</i>
2:20 pm	Break		
2:40 pm	eBay Extreme Analytics <i>Tom Fastner</i>	Developing, Building, and Debugging Cross-Platform Mobile Apps with HTML and PhoneGap <i>Christophe Coenraets</i>	Going real-time: How to build a streaming API <i>Ross Mason</i>
3:30 pm	Break		
4:00 pm	Through The Looking Glass - Applying Analytics to Development <i>Michael Feathers</i>	Developing the FT web app <i>Robert Shilston</i>	Distributed, Real-time Web Apps with Stack.io <i>Gabriel Grant</i>
4:50 pm	Exhibitor Reception in Ballroom Foyer (Street Level) and Seacliff Foyer (Bay Level)		
5:35 pm	Party Keynote: Cool & Useless / Kevlin Henney		
7:30 pm	QCon Conference Party Sponsored by Basho / Offsite Location: Thirsty Bear, 661 Howard Street, San Francisco (20 min walk)		

Break			
SEACLIFF AB	MARINA	SEACLIFF CD	REGENCY
<b>PROGRAMMABLE WEB</b>	<b>USER EXPERIENCE (UX)</b>	<b>SOLUTIONS TRACK: NO SQL</b>	<b>SOLUTIONS TRACK # 1</b>
<i>Jim Webber</i>	<i>Lane Halley</i>		
Introducing Online Education to Hypermedia agents <i>Guilherme Silveira</i>	Better product definition with Lean UX and Design Thinking <i>Jeff Gothelf</i>	Common Graph Database Use Cases <i>Emil Eifrem</i>	JBoss Polyglot: Java & Beyond <i>Mark Little</i>
Break			
RESTful-Enough: How to cope with the real world and still make sure your Public API doesn't suck <i>Phil Calçado</i>	High-quality, Impactful, Fast UX Research for Engineers <i>Tomer Sharon</i>	Distributed Graph Database Technology and Solutions for the Enterprise <i>Darren Wood</i>	Clustering your application with Hazelcast <i>Talip Ozturk</i>
LUNCH is served at Atrium Level (2nd floor)			
Test-Driven Web APIs <i>Ian Robinson</i>	Storyboards & the 1-Week Sprint: Effective Techniques for the Startup... <i>Robin Benke Davis</i>	The Design of a SQL Interface for a NoSQL Database <i>Stephen Buxton &amp; Mary Holstege</i>	How not to measure latency <i>Gil Tene</i>
Break			
Real-Life Stories on Building Hypermedia APIs <i>Mike Amundsen</i>	Quora on Mobile: A Product-Centered Approach to Multi-Platform Deployment <i>Anne K Halsall</i>	Sustainable Software Development <i>Alexander von Zitzewitz</i>	Continuous Happiness <i>Chris Kelly</i>
Break			
Caching Hypermedia APIs <i>Tim Stokes</i>	Co-making Great Products <i>Jeff Patton</i>	Do you C what I C?: The resurgence of native application <i>John "JT" Thomas</i>	How we simplified Web, Mobile and Cloud development ... <i>Shay Shmeltzer</i>

## BIG DATA AND ANALYTICS

**Host :** Ken Collier **Location:** Grand Ballroom A

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*The amount of data we have available is growing exponentially, fuelled by cheap storage, abundant sensors and the social web. But we're still at the beginning of the journey in terms of understand how to mine that data for actionable intelligence. The speakers in this track will share their experiences of processing and correlating private and public data and the unexpected things they learned in the process.*

## CROSS PLATFORM MOBILE

**Host :** Maximiliano Firtman **Location:** Grand Ballroom BC

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*Mobile computing is coming of age and in the following years it will be bigger than ever! In this track we'll focus on delivering sophisticated applications with html5 and cross-platform frameworks. We'll also present case studies from some advanced mobile applications, look at the technologies that make these possible, and get expert insight from the people that shape the mobile landscape.*

## REALTIME WEB

**Host :** Matthew Eernisse **Location:** Bayview

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*Today's user interfaces are entirely web-driven and yet as rich as the desktop guis of years gone by. Approaches such as the websocket protocol, server-sent events, and ubiquitous javascript all help power online multiplayer games, social networking systems, and live streaming systems that deliver events and data seemingly instantaneously and effortlessly to multitudes of concurrent users. In this track you'll hear from developers who are using these, other tools and techniques to help deliver today's real-time web revolution.*

## PROGRAMMABLE WEB

**Host :** Jim Webber **Location:** Seacliff AB

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*We're in an era where web apis are as ubiquitous as web sites once were. Intricate webs of commerce over the internet have gone from pipe dream to everyday occurrence. Behind-the-scenes innovation has taken us from screen scraping to (near) real-time business on the web. In this track people behind that*



*innovation will showcase their technology stacks and demonstrate how you can leverage the tools and techniques required to make your web apis every bit as compelling as your human-facing web properties.*

## USER EXPERIENCE (UX)

Host : Lane Halley **Location:** Marina

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*How do we create winning products that meet business goals and delight users? This track showcases industry leaders who will share their expertise in product design strategy, creative collaboration, user interface (ui), front end development and user research. Using first-hand stories from our work with large and small companies, we will share principles and best practices you can use to envision, validate and deliver great products.*



# Wednesday Tracks

## SOLUTIONS TRACK: NO SQL

**Location:** Seacliff CD

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*The sessions in the solutions track are focused on solving particular development problems with solutions from leading vendors in the field. Sessions in this track cover best practices and use cases that attendees will find helpful in your work.*

## SOLUTIONS TRACK # 1

**Location:** Regency

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*The sessions in the solutions track are focused on solving particular development problems with solutions from leading vendors in the field. Sessions in this track cover best practices and use cases that attendees will find helpful in your work.*

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## 100% BIG DATA. 0% HADOOP. 0% JAVA

**Pavlo Baron, Lead architect at codecentric AG**

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If your data is big enough, Hadoop it!"That's simply not true - there is much more behind this term than just a tool. In this talk I will show one possible, practically working approach and the corresponding selection of tools that help collect, mine, move around, store and provision large, unstructured data amounts. Completely without Hadoop. And even completely without Java.

**Time:** Wednesday 10:30 am - 11:20 am

**Location:** Grand Ballroom A **Track:** Big Data and Analytics

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## MULTIPLATFORM, PROMISES AND MOBILE HTML5

**Maximiliano Firtman, Adobe Community Professional**

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This session will give information about the mobile ecosystem in 2012/2013 and how to understand multiplatform available solutions. What options do we have? When does HTML5 appear as a solution?

This session will cover distribution methods and develop-

ment mechanisms available now to create successful mobile applications.

What about JavaScript and power consumption? What is the compatibility on APIs today in mobile platforms? What to expect in the near future? Why has Facebook failed using HTML5 for the native app? When HTML5 is useful?

**Time:** Wednesday 10:30 am - 11:20 am

**Location:** Grand Ballroom BC **Track:** Cross Platform Mobile



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**THE REALTIME WEB: HTML5 WEBSOCKETS, ENGINE.IO, SOCKET.IO, SPDY, HTTP2.0 & BEYOND****Guillermo Rauch, CTO of LearnBoost**

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Socket.IO has helped the world bring WebSocket to all web browsers and mobile devices. Moving forward, exciting developments are happening in the HTTP world with the introduction of Google's SPDY, WebRTC and the future HTTP2.0.

The talk will go into an overview of the realtime web, what's new, and what we can look forward to as these technologies continue to develop and get more support from vendors and developers. In addition, we'll discuss how to scale the realtime web with Node.JS in the Cloud.

**Time:** Wednesday 10:30 am - 11:20 am**Location:** Bayview **Track:** Realtime Web

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**INTRODUCING ONLINE EDUCATION TO HYPERMEDIA AGENTS****Guilherme Silveira, Creator of Restfulie and Editorial chief of InfoQ Brazil**

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Collaborative filtering and recommendation systems is awesome and all around us. We think about our industry and how could machine learning help us recommend something to our consumers so they will buy more and we get more money. Another way of thinking is how could machine learning change our clients' life.

We will go through the core machine and how both intelligent agents and distributed content can be built using such basic web technology and connected in order to completely change the user experience while learning from one source or another.

**Time:** Wednesday 10:30 am - 11:20 am**Location:** Seacliff AB **Track:** Programmable Web

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### BETTER PRODUCT DEFINITION WITH LEAN UX AND DESIGN THINKING

**Jeff Gothelf**, *Founding partner, Proof, Author of "Lean UX: Applying lean principles to improve user experience"*

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In this session Jeff will provide an overview of how to apply the ideas behind Lean UX and Design Thinking to project definition and planning.

Using a series of case studies from large companies such as PayPal, TheLadders and Sesame Street as well as a few select startups.

**Time:** Wednesday 10:30 am - 11:20 am

**Location:** Marina **Track:** User Experience (UX)

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### COMMON GRAPH DATABASE USE CASES

**Emil Eifrem**, *CEO of Neo Technology*

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Graph databases are used in wide variety throughout Global 2000 companies. This session will highlight the most popular graph database use cases, in production within the enterprise space. While many social applications benefit from graph

databases, graphs are now implemented over a variety of sectors.

**Time:** Wednesday 10:30 am - 11:20 am

**Location:** Seacliff CD **Track:** Solutions Track: No SQL

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### JBOSS POLYGLOT: JAVA & BEYOND

**Mark Little**, *Chief Technologist of JBoss, Red Hat*

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For over a decade, Red Hat has been investing in the Java Virtual Machine (JVM), building frameworks and servers to solve large-scale problems using Java. In the past decade, many promising non-Java languages have targeted the JVM as an ideal runtime. From Ruby, to Lisp, to Javascript, Red Hat has found that the facilities they have created to support enterprise Java programmers can also benefit a new generation of engineers using alternative languages. Redesigning the wheel from scratch for each language makes no sense, so through its Polyglot efforts, Red Hat multiplies the power available to each language with ease.

**Time:** Wednesday 10:30 am - 11:20 am

**Location:** Regency **Track:** Solutions Track # 1

## APPWATCH - A BIG DATA APPLICATION MONITORING SYSTEM FOR EBAY

**Bhaven Avalani, eBay & Yuri Finklestein, eBay**

eBay's Platform Services team will present an overview of AppWatch - a large scale application and infrastructure monitoring system developed at eBay. The presentation will focus on the key architectural aspects of AppWatch including central collection of the structured application log records and metrics, OLAP processing of the collected data, event stream processing system for generating real-time health indicators, and distributed metric storage system for serving analytical queries against historic data.

**Time:** Wednesday 11:40 am - 12:30 pm

**Location:** Grand Ballroom A **Track:** Big Data and Analytics

## BUILDING SOCIAL APPS FOR ALL MOBILE PLATFORMS

**James Pearce, Head of Developer Advocacy, Facebook**

As well as debating the merits of one mobile stack versus another, developers appreciate that there are fundamental trends and challenges across all of them. Whether you are

building mobile web apps, native apps, a hybrid of the two – or all three! - how do you put people at the heart of the app's experience, and ensure that it gets the discovery and the distribution it deserves?

**Time:** Wednesday 11:40 am - 12:30 pm

**Location:** Grand Ballroom BC **Track:** Cross Platform Mobile

## INTEGRATING THE CLASSIC MVC ARCHITECTURE WITH REAL TIME

**Daniel Erickson, Senior JavaScript Developer at Yammer**

Modern web applications make good use of the MVC (Model View Controller) approach to application design but more and more apps require real time interactions. In this session we'll dive into how to use the Geddy web application framework and Socket.io to build a well-organized real time MVC application. We'll see how to create a changes feed for each model, and subscribe to those events using a real time pipe to the front end.

**Time:** Wednesday 11:40 am - 12:30 pm

**Location:** Bayview **Track:** Realtime Web

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**RESTFUL-ENOUGH: HOW TO COPE WITH THE REAL WORLD AND STILL MAKE SURE YOUR PUBLIC API DOESN'T SUCK****Phil Calcado, Soundcloud**

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SoundCloud is the biggest repository of audio content on the web, with more than 30 million users. Since our inception we had a HTTP API available for 3rd party developers to integrate with the platform.

Over time we had all kinds of integrations, from hobbyists building quick hacks to professional DJ tools and Apple's GarageBand. We quickly learnt that public APIs are a different beast from internal web services, and here usability is king. To better support all these use cases, we had to compromise on some of the core REST principles, including less focus on hypermedia and welcoming URI templates.

In this talk let's explore the good and bad technical decisions we've made, how we've implemented continuous delivery --deploying changes to the API twice a day-- without breaking our thousands of clients, and the impacts of the public API experience on our own internal services.

**Time:** Wednesday 11:40 am - 12:30 pm**Location:** Seacliff AB **Track:** Programmable Web

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**HIGH-QUALITY, IMPACTFUL, FAST UX RESEARCH FOR ENGINEERS****Tomer Sharon, User Experience Researcher, Google**

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Many software engineers, engineering leaders, and product developers want to learn from their customers about their needs and abilities. They understand that products should solve real problems for people and that they need to have an excellent user experience. Yet when it comes to conducting user experience research to actively gather insights from users about their abilities and perspectives, they have doubts. Countless software engineering practitioners perceive UX research as wasteful and slow and either do it as an afterthought or skip it completely while trusting their own intuitions.

Through three short case studies, this talk will demonstrate how UX research can be done with high quality standards, have an enormous effect, be completed quickly, and most importantly, achieved by software engineers without hiring an expert or paying thousands of dollars.

**Time:** Wednesday 11:40 am - 12:30 pm**Location:** Marina **Track:** User Experience (UX)

## DISTRIBUTED GRAPH DATABASE TECHNOLOGY AND SOLUTIONS FOR THE ENTERPRISE

**Darren Wood, Architect and Lead Developer of Infinite-Graph**

Discover the benefits of building Big Data applications utilizing distributed graph technologies with Darren Wood, Chief Architect for InfiniteGraph, the enterprise-proven distributed graph database. This session will review the features and benefits of the latest release of InfiniteGraph and include overviews of Big Data solutions in the government, health-care, mobile and telecommunication markets.

**Time:** Wednesday 11:40 am - 12:30 pm

**Location:** Seacliff CD **Track:** Solutions Track: No SQL

## CLUSTERING YOUR APPLICATION WITH HAZELCAST

**Talip Ozturk, Founder of Hazelcast**

Today's applications are getting more and more distributed everyday and it is well known that distributed programming is hard. With Hazelcast though, distributed programming is easy and lots of fun.

Common reaction of Hazelcast users is 'Ooh my God, this cannot be that easy'. Hazelcast is an open source, highly scalable, transactional, distributed/partitioned implementation of queue, map, set, list, lock and executor service for Java.

**Time:** Wednesday 11:40 am - 12:30 pm

**Location:** Regency **Track:** Solutions Track # 1



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## ORBITZ CASE STUDY: EXTENDING THE ENTERPRISE DATA WAREHOUSE WITH HADOOP

**Robert Lancaster, *Orbitz***

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Hadoop provides the ability to extract business intelligence from extremely large, heterogeneous data sets that were previously impractical to store and process in traditional data warehouses. The challenge for many companies now is in bridging the gap between data in the data warehouse and data in Hadoop. This presentation explains some steps that Orbitz has taken to bridge this gap, including examples of how Hadoop and Hive are used to aggregate data from large data sets, and how that data can be combined with relational data to create new reports that provide actionable intelligence to business users.

**Time:** Wednesday 1:30 pm - 2:20 pm

**Location:** Grand Ballroom A **Track:** Big Data and Analytics

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## THE MOBILE WEB DEVELOPER'S TOOL BELT

**Pete LePage, *Developer Advocate, Google***

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Building for mobile web requires a different mindset than desktop web development, and different sets of tools. Going

back to the dark ages of tweak/save/deploy/test/repeat isn't optimal, so what can we do?

Thankfully, there are a number of great options - from remote debugging to emulation, mobile browsers are offering more and more tools to make our lives easier.

We'll take a look at tools that you can use today to make cross platform mobile web development easier and peer into the crystal ball to see what tools the future may bring.

**Time:** Wednesday 1:30 pm - 2:20 pm

**Location:** Grand Ballroom BC **Track:** Cross Platform Mobile

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## SOCKETSTREAM - A NEW FRAMEWORK FOR A NEW WEB

**Owen Barnes, *Creator of SocketStream***

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SocketStream is a new Node.js framework which tears up the old rules of the past and ask the question: "What immersive, new experiences can we create if we send all the data your application needs over the WebSocket?" We'll look at some of the challenges to this approach, and how SocketStream helps by organizing large amounts of client code, integrating with popular third-party client-side frameworks (Angular, Ember,



Backbone, etc.), and multiplexing disparate streams of data over the Websocket.

**Time:** Wednesday 1:30 pm - 2:20 pm

**Location:** Bayview **Track:** Realtime Web

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## TEST-DRIVEN WEB APIS

**Ian Robinson, Author of "REST in Practice", Neo Technology**

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REST's hypermedia constraint is all about getting things done - that is, making changes to the state of an application to achieve a particular goal. Put simply, in a web-based hypermedia system, clients apply HTTP's uniform interface to operate links and forms in pursuit of their application goals. In this session we'll look at how we can develop and test discrete parts of a hypermedia-driven distributed system, both server-side resources and clients that can be guided on the fly to complete their application goals.

**Time:** Wednesday 1:30 pm - 2:20 pm

**Location:** Seacliff AB **Track:** Programmable Web

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## STORYBOARDS & THE 1-WEEK SPRINT: EFFECTIVE TECHNIQUES FOR THE STARTUP & THE ENTERPRISE ORGANIZATION

**Robin Benke Davis, User Experience Strategist at Credit Suisse**

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In this talk Robin explores the use of the Storyboard as an effective communication and collaboration medium to deliver high-quality products & experiences. Using real-world examples, she will provide an overview of:

- The different types of Storyboards, why they are essential, and when to use which and why
- Why it's important to get it wrong as soon as possible
- Why it's more effective to be storyteller than an information deliverer
- How the Storyboard informs the Product Roadmap and the Sprint Plan
- Tips for the 1-Week Sprint Cycle

**Time:** Wednesday 1:30 pm - 2:20 pm

**Location:** Marina **Track:** User Experience (UX)

## THE DESIGN OF A SQL INTERFACE FOR A NOSQL DATABASE

**Mary Holstege, MarkLogic & Stephen Buxton, MarkLogic**

We briefly review the architecture of a NoSQL Document Database that stores XML, JSON, text, and binary data. Like most NoSQL databases, it has a variety of native interfaces, none of which connect to standard BI tools. We will then discuss the design of a SQL interface and ODBC driver for connecting the database to Cognos and Tableau.

**Time:** Wednesday 1:30 pm - 2:20 pm

**Location:** Seacliff CD **Track:** Solutions Track: No SQL



## HOW NOT TO MEASURE LATENCY

**Gil Tene, CTO and Co-founder, Azul Systems**

Understanding application responsiveness and latency is critical to delivering good application behavior. But good characterization of bad data is useless. When measurements of response time present false or misleading latency information, even the best analysis can lead to wrong operational decisions and poor application experience.

In this talk, Gil will discuss some common pitfalls encountered in characterizing latency. He will demonstrate some false measurement techniques that lead to incorrect results, discuss the fallacy of using standard deviation measurements, common discontinuities found in most computing platforms, and how back pressure and coordinated data omission issues can skew measurement results dramatically.

**Time:** Wednesday 1:30 pm - 2:20 pm

**Location:** Regency **Track:** Solutions Track # 1



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**EBAY EXTREME ANALYTICS**

**Tom Fastner, Senior Architect, Analytic Platforms, eBay**

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Tom Fastner will present eBay's analytics platform story and discuss the latest trends emerging in the enterprise. He will provide an overview of how his organization is addressing the big data challenge and supporting multi-petabytes of analytical processing daily, on top of a technology stack built to scale and provide self-service analytics throughout eBay.

**Time:** Wednesday 2:40 pm - 3:30 pm

**Location:** Grand Ballroom A **Track:** Big Data and Analytics

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**DEVELOPING, BUILDING, AND DEBUGGING CROSS-PLATFORM MOBILE APPS WITH HTML AND PHONEGAP**

**Christophe Coenraets, Adobe**

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HTML has emerged as a powerful alternative to "native" to enable cross-platform mobile application development. In this session, Christophe discusses when to use which technology (native or HTML), how to build large, complex, secure, and native-like mobile apps using HTML, and how to use PhoneGap to package your HTML application as a native app for distribu-

Rich Hickey

tion through the different public or private app stores.

**Time:** Wednesday 2:40 pm - 3:30 pm

**Location:** Grand Ballroom BC **Track:** Cross Platform Mobile

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## GOING REAL-TIME: HOW TO BUILD A STREAMING API

**Ross Mason, Founder and CTO of MuleSoft, Creator of the Mule Integration Platform**

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The leading APIs such as Facebook, Twitter and Salesforce all offer a real-time APIs that overcome the limitations of the traditional RPC model of communication. These APIs provide data updates in real-time without the polling. Anyone building an API should learn from these trail-blazers and this session will introduce the concept of Streaming APIs, how you know if you need one and the explain how to build a streaming API.

**Time:** Wednesday 2:40 pm - 3:30 pm

**Location:** Bayview **Track:** Realtime Web

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## REAL-LIFE STORIES ON BUILDING HYPERMEDIA APIS

**Mike Amundsen, Principal API Architect for Layer 7 Technologies**

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As interest in Web APIs continues to rise, it's important to know the advantages and downsides of various implementation strategies. The most common style for Web APIs today is based on identifying entities using URIs and applying CRUD operations against those URIs via HTTP methods. In this session, we'll explore an alternate approach to implementing APIs, based on designing messages instead of URIs and using in-message affordances instead of direct protocol methods. This talk provides a working definition for Hypermedia Types, identifies the H-Factors that can appear in any hypermedia type, and the four design elements used in authoring hypermedia types

**Time:** Wednesday 2:40 pm - 3:30 pm

**Location:** Seacliff AB **Track:** Programmable Web

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**QUORA ON MOBILE: A PRODUCT-CENTERED APPROACH TO MULTI-PLATFORM DEPLOYMENT**

**Anne K Halsall, *Product Designer at Quora***

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Many web-based product companies face great difficulty in bringing their products to mobile in a satisfying way. Indeed, multi-platform deployment of any kind presents challenges to product designers, who must balance the tradeoffs between platform consistency and product fidelity. Anne will review the nearly two-year process of designing, developing, and re-releasing the official mobile apps for Quora, then share lessons learned and words of advice on playing to the strengths of your team to create great product experiences across multiple and varying platforms.

**Time:** Wednesday 2:40 pm - 3:30 pm

**Location:** Marina **Track:** User Experience (UX)

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**SUSTAINABLE SOFTWARE DEVELOPMENT**

**Alexander von Zitzewitz, *Co-founder of hello2morrow Inc***

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Almost every non-trivial software system suffers from the accumulation of technical debt and structural erosion. With every new release quality metrics and developer productivity go down, while it becomes more and more difficult to change or maintain the system. This session first looks at the technical and social causes of this industry wide problem. From there the focus will shift to possible solutions involving organizational changes, process improvements and tool-based fully automated control of quality metrics and architecture.

**Time:** Wednesday 2:40 pm - 3:30 pm

**Location:** Seacliff CD **Track:** Solutions Track: No SQL



## THROUGH THE LOOKING GLASS - APPLYING ANALYTICS TO DEVELOPMENT

**Michael Feathers, *Member of the Technical Staff, Groupon***

Advances in storage capacity have accelerated interest in querying large datasets for business decision support. While developers have been building tools in this area for years, they've rarely turned the focus back on themselves and asked what they can learn from the historical data that is accumulated as a side effect of their development efforts.

In this talk, Michael Feathers will describe things that development teams can learn through analysis of their source code repositories and ancillary data. Decision support is not only for business.

**Time:** Wednesday 4:00 pm - 4:50 pm

**Location:** Grand Ballroom A **Track:** Big Data and Analytics

## CROSS PLATFORM MOBILE 5

**Robert Shilston, *Director, Labs Division, Financial Times***

For over a year, the Financial Times has been held up as one of the great success stories of HTML5, but implementing the technologies in a practical, truly interoperable way remains a tough challenge.

In this session, Rob will provide a demo of the FT app, and discuss the technology choices and architectural approaches that have been used to solve some of the most difficult technical challenges faced in web development.

**Time:** Wednesday 4:00 pm - 4:50 pm

**Location:** Grand Ballroom BC **Track:** Cross Platform Mobile

## DISTRIBUTED, REAL-TIME WEB APPS WITH STACK.IO

**Gabriel Grant, *Developer Advocate and Engineer, dotCloud***

Stack.io is an open-source communication framework to help rapidly build real-time web applications as a collection of services. By providing configuration-free service-to-service and service-to-front-end messaging via WebSockets, Stack.io makes it easy to decompose complex code into functionally simple components in a flexible, language-agnostic way. It augments the standard RPC model with bi-directional streaming, and provides a layer of auth and service discovery on top.

**Time:** Wednesday 4:00 pm - 4:50 pm

**Location:** Bayview **Track:** Realtime Web

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## CACHING HYPERMEDIA APIS

**Tim Stokes, Applications Architect at FamilySearch.org**

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Cache invalidation in large systems can end up costing as much or more than not caching at all. But careful design of the shape and scope of your hypermedia resources can enable a system to rely on some of the natural behaviors that are built into the HTTP 1.1 protocol. Many real world examples will be used as we examine what works and what doesn't? How long can you cache things? How to make eTags cheaper? What can be cached and what can't? And why cache things at all?

**Time:** Wednesday 4:00 pm - 4:50 pm

**Location:** Seacliff AB **Track:** Programmable Web



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## CO-MAKING GREAT PRODUCTS

**Jeff Patton, Agile and Product Design Coach, Co-founder of Comakers LLC**

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This talk is about an alternative way of working. In this talk Jeff explores companies beginning to adopt a style of working where everyone in the organization gets involved with identifying and solving problems. You'll hear examples from real companies describing their practices for learning first-hand about customers and users, practices for collaboratively designing solutions for the problems found in the real world, and approaches to learning if what we created really benefited anyone.

**Time:** Wednesday 4:00 pm - 4:50 pm

**Location:** Marina **Track:** User Experience (UX)

## DO YOU C WHAT I C?: THE RESURGENCE OF NATIVE APPLICATION

**John "JT" Thomas**, *Director of Product Management for Developer Tools at Embarcadero Technologies*

Abstractions and layers are good for many things, but some days you have to go native and be fast and direct in your programming. JT will show how the tools from Embarcadero Technologies can help you create native applications. You C?

**Time:** Wednesday 4:00 pm - 4:50 pm

**Location:** Seacliff CD **Track:** Solutions Track: No SQL



## HOW WE SIMPLIFIED WEB, MOBILE AND CLOUD DEVELOPMENT FOR OUR OWN DEVELOPERS? - THE ORACLE STORY

**Shay Shmeltzer**, *Sr Group Manager at Oracle*

Over the past several years, Oracle has been developing a new set of enterprise applications in what is probably one of the largest Java based development project in the world. How do you take 3000 developers and make them productive? How do you insure the delivery of cutting edge UIs for both Mobile and Web channels? How do you enable Cloud based development and deployment?

Come and learn how we did it at Oracle, and see how the same technologies and methodologies can apply to your development efforts.

**Time:** Wednesday 4:00 pm - 4:50 pm

**Location:** Regency **Track:** Solutions Track # 1





# The Distributed Graph Database™



Visit us at Booth 10 to experience the power of the Distributed Graph Database™ (DGDB™).

Don't miss InfiniteGraph Chief Architect Darren Wood's presentation: Distributed Graph Database Technology Wed., 11/8 11:40-12:30pm

# DGDB™

[www.Objectivity.com/InfiniteGraph](http://www.Objectivity.com/InfiniteGraph)

# Schedule Thursday

9:00 am	Conference Intro and Track Introduction		
9:20 am	NoSQL: Past, Present, Future / Eric Brewer		
10:10 am	Break		
ROOM	GRAND BALLROOM A	GRAND BALLROOM BC	BAYVIEW
TRACK	LOOSE CONCURRENCY & CAP THEOREM TODAY	TAMING HTML5 & JAVASCRIPT	CONTINUOUS DELIVERY
HOST	Sadek Drobi	Dio Synodinos	Jez Humble
10:30 am	Exploiting Loopholes in CAP <i>Michael T. Nygard</i>	SPDY, err.. HTTP 2.0 is coming! <i>Roberto Peon</i>	Changing Culture & Being a Force for Awesome <i>Jesse Robbins</i>
11:20 am	Break		
11:40 pm	Open Space: Loose Concurrency & CAP	Open Space: Taming HTML5 & JavaScript	Open Space: Continuous Delivery
12:40 pm	LUNCH is served at Atrium Level (2nd floor)		
1:40 pm	The CAP balancing act: Building reliable data stores <i>Jeremy Edberg</i>	Building for a Billion Users from Silicon Valley <i>David Mortenson (NB! New location !)</i> <i>Track: Tales from Silicon Valley</i>	Product Development with Continuous Experimentation <i>Frank Harris &amp; Nell Thomas</i>
2:30 pm	Break		
2:50 pm	Acknowledging CAP at the Root -- in the Domain Model <i>Eric Evans</i>	Javascript Performance Patterns <i>Stoyan Stefanov</i>	Large-Scale Continuous Testing in the Cloud <i>John Penix</i>
3:40 pm	Break		
4:10 pm	Deconstructing the Database <i>Rich Hickey</i>	The Beauty of Constraints <i>Faruk Ates</i>	Release Engineering at Facebook <i>Chuck Rossi</i>
5:00 pm	Break		
5:20 pm	Fear no more: Embrace eventual consistency <i>Sean Cribbs</i>	"Batteries included": Advantages of an End-to-end JavaScript Stack <i>Juergen Fesslmeier</i>	Adopting Continuous Delivery <i>Jez Humble</i>
6:10 pm	Hospitality Suites hosted by VMware (Hospitality Room) and Oracle (Views Lounge) at the Atrium Level		
6:55 pm	User Groups: Everyone can participate, you can register on the QCon SF website: <a href="http://qconsf.com/sf2012/usergroups/">http://qconsf.com/sf2012/usergroups/</a>		

Break			
SEACLIFF AB	SEACLIFF CD	REGENCY	MARINA
TALES FROM SILICON VALLEY	JAVA RENAISSANCE	SOLUTION STRACK: BIG DATA DEV OPS	SOLUTIONS TRACK # 1
<i>Nitin Bharti</i>	<i>Bob Lee</i>		
In space, no one can hear you scream: Software Development at the Final Frontier <i>John Tangney</i>	An Overview of Guava: Google Core Libraries for Java <i>Kevin Bourrillion</i>	Achieving 10X WAN Efficiency in Globally Distributed Applications <i>Hans Jespersen</i>	Combatting Antipatterns with Platform as a Service <i>John Wetherill</i>
Break			
Open Space: Tales from Silicon Valley	Open Space: Java Renaissance		
LUNCH is served at Atrium Level (2nd floor)			
JSR 356: Building HTML5 WebSocket Applications in Java. <i>Arun Gupta (New speaker!) Track: HTML5</i>	Dropwizard - make features not WAR <i>Ryan Kennedy</i>	Big, Fast and Flexible Data <i>Fausto Ibarra</i>	Building Mobile HTML5 Apps in Hours, Not Days <i>Aditya Bansod</i>
Break			
Software development in Genentech(gRED)... <i>Erik Bierwagen</i>	Dagger, a productive dependency injection tool <i>Jesse Wilson</i>	Speeding Up Big Data Processing – Beyond Just Adding Hardware <i>Michael Kopp</i>	Call of Duty: Dev Ops <i>Stephen Burton</i>
Break			
Google Apps' Identity Crisis <i>Derek Parham</i>	Android App Anatomy <i>Eric Burke</i>	Streaming MapReduce with GridGain... <i>Nikita Ivanov</i>	Riak and Dynamo, Five Years Later <i>Andy Gross</i>
<i>Engineering Elegance: The Secrets of Square's Stack</i> <i>Bob Lee</i>	Project Lambda in Java 8 <i>Dan Smith</i>	Warm Up to Identity Protocol Soup <i>Pamela Dingle</i>	JMX: Get the Most Out of This Unsung Hero! <i>Tom Lubinski</i>

## LOOSE CONCURRENCY & CAP THEOREM TODAY

Host : Sadek Drobi **Location:** Grand Ballroom A

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*A dozen years ago the first successful massive scale distributed systems started to appear, changing our perception about how best to build highly reliable and always-available web services. The cap theorem played a significant role in explaining the tradeoffs necessary for such systems, and it's helped us learn a lot in the last 12 years. In this track you'll hear from practitioners continuing to advance the state of the art in distributed systems at massive scale and how they provide extremely reliable, available, and concurrent systems while dealing with issues such as unpredictable latency, eventual consistency, capturing causality, and inevitable partial failure.*

## TRACK : TAMING HTML5 & JAVASCRIPT

Host : Dio Synodinos **Location:** Grand Ballroom BC

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*The browser is becoming the default platform and this track is about its de facto standards: html5 and javascript. Leading experts in the field will provide valuable insight into how they*

*leverage html5 and javascript for building innovative products and services. Presentations will cover several issues like motivations, best-practices, security considerations, deployment patterns and more.*

## CONTINUOUS DELIVERY

Host : Jez Humble **Location:** Bayview

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*Continuous delivery means being able to release software on demand at the push of a button. This track explores the technical and cultural elements that enable continuous delivery, using examples from large-scale systems. We'll also look at the consequences of continuous delivery - how it enables rapid learning through techniques such as multivariate testing, and how it changes the way product development works.*

## TALES FROM SILICON VALLEY

Host : Nitin Bharti **Location:** Grand Ballroom A

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*This track provides a unique perspective on life in silicon valley and san francisco. This perspective includes observations and anecdotes of software development in silicon valley*

## JAVA RENAISSANCE

Host : Bob Lee Location: Seacliff AB

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*For many java represents a scalable, reliable, rich in code libraries, safe, tried and true, pragmatic choice for developing systems. Safe, but vanilla ice cream bland. With java 7 & 8, java is exciting again. Java 7 has bred new life into the java ecosystem, and with java 8 sdk being released in 2013 with lambda expressions and virtual extensions there is a lot more change and innovation to come. Java 7 also marks the addition of invokedynamic which allows java vm to support other languages jruby, groovy at near native java speeds. This track will focus on how we can leverage the reinvigorated java toolset and ecosystem.*



Bob Lee

## Thursday Tracks

## SOLUTIONS TRACK: BIG DATA AND DEV OPS

Location: Regency

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*The sessions in the Solutions Track are focused on solving particular development problems with solutions from leading vendors in the field. Sessions in this track cover best practices and use cases that attendees will find helpful in your work.*

## SOLUTIONS TRACK # 2

Location: Marina

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*The sessions in the Solutions Track are focused on solving particular development problems with solutions from leading vendors in the field. Sessions in this track cover best practices and use cases that attendees will find helpful in your work.*

## EXPLOITING LOOPHOLES IN CAP

**Michael T. Nygard, Author of "Release It!"**

By now, we've all learned the summary version of CAP: choose at most two from "Consistency", "Availability", and "Partition-tolerance." It's usually framed as a binary choice between C and A, with P as the unavoidable reality. Exploring CAP at a deeper level, though, we'll find several loopholes that you can use to engineer practical, real-world systems with desirable features. After this talk, you'll know how to use your domain knowledge to make thoughtful choices in your distributed systems.

**Time:** Thursday 10:30 am - 11:20 am

**Location:** Grand Ballroom A **Track:** Loose Concurrency & CAP theorem today



Michael T. Nygard

## SPDY, ERR.. HTTP 2.0 IS COMING!

**Ilya Grigorik, Developer Advocate, Chrome @ Google**

The HTTPBis working group is now hard at work on HTTP 2.0, and SPDY was chosen as the starting point for the new specification. In this session we'll cover all you need to know about HTTP 2.0. We'll start from the beginning, talk about the underlying reasons and improvements, and then get more hands on to help you plan for HTTP 2.0.

**Time:** Thursday 10:30 am - 11:20 am

**Location:** Grand Ballroom BC **Track:** HTML5, JavaScript

## CHANGING CULTURE & BEING A FORCE FOR AWESOME

**Jesse Robbins, Founding CEO of Opscode**

Jesse Robbins explains how to be a force for Awesome. He will explain how to evangelize & overcome cultural resistance to change (& share his own painfully funny lessons on how not to do it ;-). Jesse will teach you just enough Business Speak to be dangerous while you infect your organization with awesome, make your job better, and get more done.

**Time:** Thursday 10:30 am - 11:20 am

**Location:** Bayview **Track:** Continuous Delivery

## IN SPACE, NO ONE CAN HEAR YOU SCREAM: SOFTWARE DEVELOPMENT AT THE FINAL FRONTIER

**John Tangney, Senior Software Engineer, Skybox Imaging**

Silicon Valley startups are small, fast & lean. Aerospace companies can be big, slow & stodgy.

This story is about distributed, heterogeneous systems and Big Data Hadoop clusters. It's a story in which Waterfall meets Test-Driven Development and Continuous Delivery. It's about QA, DevOps and Mission Operations. It's about developing software and designing and building hardware – some of which flies in space.

In this talk I will describe some of those walls we had to tear down and how we have dealt with them – or not

**Time:** Thursday 10:30 am - 11:20 am

**Location:** Seacliff AB **Track:** Tales from Silicon Valley



## AN OVERVIEW OF GUAVA: GOOGLE CORE LIBRARIES FOR JAVA

**Kevin Bourrillion**

This talk will provide an overview of the Guava libraries (<http://code.google.com/p/guava-libraries/>), touching on topics such as collections, caching, hashing, primitives support, concurrency utilities, common annotations, string processing, I/O, math utilities, and more!

**Time:** Thursday 10:30 am - 11:20 am

**Location:** Seacliff CD **Track:** Java Renaissance

## COMBATTING ANTIPATTERNS WITH PLATFORM AS A SERVICE

**John Wetherill, *ActiveState's Developer Evangelist***

This talk identifies several costly yet surprisingly common antipatterns practiced regularly by corporations of all sizes and across all industries.

It then describes specific ways that PaaS, with great agility, reduces and often eliminates the underlying causes of each practice, in most cases with little explicit action required by the developer.

**Time:** Thursday 10:30 am - 11:20 am

**Location:** Regency **Track:** Solutions Track: Big Data and Dev Ops



## ACHIEVING 10X WAN EFFICIENCY IN GLOBALLY DISTRIBUTED APPLICATIONS

**Hans Jespersen, *Principal Systems Engineer at Solace Systems***

Specialized hardware is giving architects new high-efficiency options to accelerate the WAN and avoid “long fat network” problems. This session will explore how network processors, FPGAs, flash storage, ultra capacitors, and other exotic silicon are increasing the capabilities and performance of WAN-based applications. Specific use cases include Distributed Message Routing, Web Data Streaming, Sensor Nets, and Active/Active Data Grid Replication.

**Time:** Thursday 10:30 am - 11:20 am

**Location:** Marina **Track:** Solutions Track # 2



**OPEN SPACE SESSIONS**

*An unconference part of the conference, where the participants have the chance, under facilitation and guidance, to discuss the topics they find interesting and network with like-minded people.*

**OPEN SPACE: LOOSE CONCURRENCY & CAP**

**Time:** Thursday 11:40 am - 12:40 pm

**Location:** Grand Ballroom A **Track:** Loose Concurrency & CAP theorem today

**OPEN SPACE: TAMING HTML5 & JAVASCRIPT**

**Time:** Thursday 11:40 am - 12:40 pm

**Location:** Grand Ballroom BC **Track:** Taming HTML5 & JavaScript

**OPEN SPACE: CONTINUOUS DELIVERY**

**Time:** Thursday 11:40 am - 12:40 pm

**Location:** Bayview **Track:** Continuous Delivery

**OPEN SPACE: TALES FROM SILICON VALLEY**

**Time:** Thursday 11:40 am - 12:40 pm

**Location:** Seacliff AB **Track:** Tales from Silicon Valley

**OPEN SPACE: JAVA RENAISSANCE**

**Time:** Thursday 11:40 am - 12:40 pm

**Location:** Seacliff CD **Track:** Java Renaissance

## THE CAP BALANCING ACT: BUILDING RELIABLE DATA STORES

**Jeremy Edberg, Reliability Architect for Netflix**

In this session you will learn how Netflix and reddit build reliable data stores. We'll cover multi-datacenter and multi-region deployments, balancing availability and money, and how Netflix uses the Simian Army to ensure resilience to failure. You'll hear tips, tricks and best practices for best balancing between C, A and P.

**Time:** Thursday 1:40 pm - 2:30 pm

**Location:** Grand Ballroom A **Track:** Loose Concurrency & CAP theorem today

## BUILDING FOR A BILLION USERS FROM SILICON VALLEY

**David Mortenson, Engineering Manager, Facebook**

Today, Facebook's infrastructure supports 900 million users around the world. It has a highly interconnected service, in which rendering a single page often involves hundreds of machines examining tens of thousands of pieces of data from dozens of different servers. And it does all this in a matter of

milliseconds, day in and day out. What's more, the Facebook product team iterates very quickly, and sometimes takes big leaps forward with products like Timeline — which means Facebook's infrastructure needs to be highly flexible as well. In this talk, David Mortenson will share key learnings from the company's efforts to meet these challenges and the unique tools and team structures Facebook employs to build a unique experience for a billion users and beyond.

**Time:** Thursday 1:40 pm - 2:30 pm

**Location:** Grand Ballroom BC **Track:** Taming HTML5 & JavaScript

## PRODUCT DEVELOPMENT WITH CONTINUOUS EXPERIMENTATION

**Nell Thomas, Data Analyst at Etsy & Frank Harris, Product Manager at Etsy**

Over the last year, Etsy has made significant changes to the way its shoppers find and discover items. In this talk, we will discuss how we use data to inform product development, from prioritization to experimentation to launch communication, and everything in between. We will discuss the challenges of planning with continuous experimentation and deployment, as well as the evolution of Etsy's data culture. Fi-

nally, we will overview how these changes and improvements were communicated to Etsy's sellers.

**Time:** Thursday 1:40 pm - 2:30 pm

**Location:** Bayview **Track:** Continuous Delivery

## JSR 356: BUILDING HTML5 WEBSOCKET APPLICATIONS IN JAVA.

**Arun Gupta, Java EE & GlassFish Guy, Oracle**

Arun Gupta is a Java evangelist working at Oracle. He works to create and foster the community around Java EE and GlassFish. He has extensive world wide speaking experience on myriad of topics and loves to engage with the community, customers, partners, and JUGs everywhere to spread the goodness of Java. He is a prolific blogger at <http://blogs.oracle.com/arungupta> with over 1200 blog entries and frequent visitors from all around the world with a cumulative page visits > 1 million.

**Time:** Thursday 1:40 pm - 2:30 pm

**Location:** Seacliff AB **Track:** Taming HTML5 & JavaScript

## DROPWIZARD - MAKE FEATURES NOT WAR

**Ryan Kennedy, Director of Core Services Team, Yammer**

Dropwizard is Yammer's framework for quickly building RESTful web services on the Java Virtual Machine with ease. Learn how Yammer utilizes Dropwizard to save themselves from the misery of application servers, mindless configuration and tedious deploys all in the name of rapidly shipping product.

**Time:** Thursday 1:40 pm - 2:30 pm

**Location:** Seacliff CD **Track:** Java Renaissance

## BIG, FAST AND FLEXIBLE DATA

**Fausto Ibarra, Sr. Director of Product Management at VMware**

With the evolution of the cloud, social media applications, and mobile device proliferation, we are seeing an explosion in the volume of data enterprises are forced to manage. We are seeing the data challenges facing the enterprise today becoming more complex and the traditional database of old is being stretched to handle these challenges - one size no longer fits all. Topics to be covered: Big Data: find out how Hadoop and new analytics technologies are allowing companies to use

data in new ways to gain meaningful business insights. Fast Data:bringing data logic in-memory can allow for dramatic scale, reduced costs,and improved performanceFlexible Data:explore how NoSQL and open source relational data technologies can improveyour data strategyCloud Delivery Model:virtualizing the database layer allows enterprise IT departments to offerself-service data services elastically on demand, maintain centralizedcontrol, and operate within regulatory guidelines. Join this session to gain insight into how Big, Fast and Flexible Data deliveredthrough a Cloud delivery model can help you solve your company's data problems.

**Time:** Thursday 1:40 pm - 2:30 pm

**Location:** Regency **Track:** SolutionTrack: Big Data and Dev Ops

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## BUILDING MOBILE HTML5 APPS IN HOURS, NOT DAYS

**Aditya Bansod, VP of Product Marketing**

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HTML5 has delivered on the promise to make building mobile apps work seamlessly across devices and operating systems. But developers looking to build applications still have to code HTML, JavaScript and CSS by hand, often laboriously rebuild-

ing features that exist in native platforms without the benefit of tooling that native platforms offer. New tools in the HTML5 space, like Sencha Architect make building mobile HTML5 apps as fun and easy as building native apps.

**Time:** Thursday 1:40 pm - 2:30 pm

**Location:** Marina **Track:** SolutionTrack # 2



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## ACKNOWLEDGING CAP AT THE ROOT - IN THE DOMAIN MODEL

**Eric Evans, Author of Domain Driven Design**

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In this talk, I'll discuss three DDD patterns that help us address CAP tradeoffs: Aggregates, Domain Events and Bounded Contexts.

I will not be able to explain these patterns in depth, but I hope to give a sense of the nature of these conceptual tools and where they come into play in designing practical systems constrained by CAP.

**Time:** Thursday 2:50 pm - 3:40 pm

**Location:** Grand Ballroom A **Track:** Loose Concurrency & CAP theorem today

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## JAVASCRIPT PERFORMANCE PATTERNS

**Stoyan Stefanov, Facebook, Author of "JavaScript Patterns" by O'Reilly**

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This session looks at both page delivery and user interaction to highlight patterns and areas of improvement starting with proper benchmarking and profiling. Understanding what to improve (e.g. DOM manipulation) is as valuable as under-

standing what not to bother with (e.g. unrolling loops) We'll also look at some of the new and shiny in HTML5 and ECMAScript5 and how certain features affect performance, e.g. data-\* attributes, localStorage and various "shims".

**Time:** Thursday 2:50 pm - 3:40 pm

**Location:** Grand Ballroom BC **Track:** Taming HTML5 & JavaScript

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## LARGE-SCALE CONTINUOUS TESTING IN THE CLOUD

**John Penix, Developer Infrastructure Team, Google, Inc**

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The primary Google code base receives up to 20+ code changes per minute with 50% of the source files changing every month. In this talk, I'll describe the basic architecture of the test automation system and the supporting build system infrastructure. I'll then describe the coarse-grained dependency analysis being used to select tests and how build system optimizations can compensate for imprecise dependency analysis. I'll also discuss how the usage of the system has changed and how we are currently evolving the test prioritization scheme.

**Time:** Thursday 2:50 pm - 3:40 pm

**Location:** Bayview **Track:** Continuous Delivery

## TO YOUR HEALTH: SOFTWARE DEVELOPMENT IN GENETECH RESEARCH AND EARLY DEVELOPMENT (GRED)

**Erik Bierwagen, Principal Programmer Analyst, Genentech**

Research is by definition an ever changing body of information and data. Developing software to support research efforts presents constant challenges. As we try to gain a better understanding of genetics and the underlying biology of diseases such as cancer and alzheimers, there is a great need to tie together data from disparate groups and make it easily accessible for data analysis. We need to balance many competing needs:

Flexibility

Ease of data entry

Ensuring high quality and completeness of entered data

Easy aggregation for data analysis

Searching for and extracting appropriate data sets

Flexible display of the data

In this talk I will describe some examples of the software we have developed that balances these needs

**Time:** Thursday 2:50 pm - 3:40 pm

**Location:** Seacliff AB **Track:** Tales from Silicon Valley

## DAGGER, A PRODUCTIVE DEPENDENCY INJECTION TOOL

**Jesse Wilson, App and Open Source Developer**

Tools like Guice and Spring increase flexibility, reusability and testability. These frameworks use configuration, conventions, reflection and a little magic to do their work. Dagger approaches the same goal in a different way. This talk introduces Dagger and what makes it different. You'll learn how you can put Dagger to use in your Android or Java application. It tours Dagger's implementation and provides advice on building frameworks that run efficiently on Android.

**Time:** Thursday 2:50 pm - 3:40 pm

**Location:** Seacliff CD **Track:** Java Renaissance

## SPEEDING UP BIG DATA PROCESSING? BEYOND JUST ADDING HARDWARE

**Michael Kopp, Technology Strategist, Compuware-Dynatrace**

There are many Hadoop distributions, each promising faster processing than the next. And every other day a new NoSQL solution promises unprecedented performance. In this session, I will show you why performance is still driven by your

applications and users. You will learn how to approach performance by going beyond just adding hardware or adjusting configuration knobs on your Big Data solution, to addressing the issue at its core.

**Time:** Thursday 2:50 pm - 3:40 pm

**Location:** Regency **Track:** Solution Track: Big Data and Dev Ops

### CALL OF DUTY: DEV OPS

**Stephen Burton, Tech Evangelist at AppDynamics**

It's no longer enough to wage war in pre-production. That's where developers have fought their conflicts time and time again—but now they need to cross battle lines and head into Production. It's a new kind of battle, one torn apart with operational complexity, agile missions and server warfare. With access to virtual platforms, monitoring weaponry, and automation tools, developers must now fight to ensure the performance and availability of mission-critical business applications. In this session we'll look at the production battleground of modern mission-critical apps. An overview of special weapons and agile tactics (SWAT) for DevOps. Real-life-

application fatalities and incidents. Lessons learned from Customers winning the DevOps war. Will you heed the call?

**Time:** Thursday 2:50 pm - 3:40 pm

**Location:** Marina **Track:** Solutions Track # 2



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## DECONSTRUCTING THE DATABASE

**Rich Hickey, *Creator of Clojure***

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What happens when you deconstruct the traditional monolithic database - separating transaction processing, storage and query into independent cooperating services? Coupled with a data model based around atomic facts and awareness of time, you get a significantly different set of capabilities and tradeoffs. This talk will discuss how these ideas play out in the design and architecture of Datomic, a new database.

**Time:** Thursday 4:10 pm - 5:00 pm

**Location:** Grand Ballroom A **Track:** Loose Concurrency & CAP theorem today

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## THE BEAUTY OF CONSTRAINTS

**Faruk Ates, *Founder of four53***

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Making any product is an exciting as well as challenging endeavor, especially in technology and software. As humans we are prone to let our creativity run free — but freedom is not always the best solution to solving problems. We benefit from constraints to truly ignite our creativity. More often than

not, however, our code needs constraints, which we are prone to overlook.

In his session, I will talk about the values and lessons learned from imposing constraints on software projects, and how they play a critical role in good API design.

**Time:** Thursday 4:10 pm - 5:00 pm

**Location:** Grand Ballroom BC **Track:** Taming HTML5 & JavaScript

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## RELEASE ENGINEERING AT FACEBOOK

**Chuck Rossi, *Release Engineering Manager, Facebook***

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Every day Facebook is safely updated with hundreds of changes including bug fixes, new features, and product improvements. Given hundreds of engineers, thousands of changes every week and hundreds of millions of users we have worldwide, this task seems like it should be impossible. In this talk, Chuck Rossi will dig into the tools and processes built by Facebook's Release Engineering team that make it possible to push daily updates to the site.

**Time:** Thursday 4:10 pm - 5:00 pm

**Location:** Bayview **Track:** Continuous Delivery



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## GOOGLE APPS' IDENTITY CRISIS

**Derek Parham**

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For many years, Google Apps customers couldn't access the majority of Google's vast services without reverting to their personal accounts. The vast majority of online apps assume that users only have one persona while accessing the service, but that is rapidly changing. As businesses, schools and other organizations move to the cloud, more users will be accessing the same service in different contexts.

Google Apps was one of the first online services to cater to both consumer and business users at the same time. Come listen to the lessons learned plus how Google executed this 4+ year migration.

**Time:** Thursday 4:10 pm - 5:00 pm **Location:** Seacliff AB

**Track:** Tales from Silicon Valley

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## ANDROID APP ANATOMY

**Eric Burke, *Software Engineer at Square***

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Android has come a long way since version 1.0. Thanks to the compatibility library and ActionBarSherlock we can bring the latest Android experience to any device. In this talk, Eric Burke shows how to craft modern Android applications in a clean, maintainable way using the newest APIs and open source frameworks.

**Time:** Thursday 4:10 pm - 5:00 pm **Location:** Seacliff CD

**Track:** Java Renaissance

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## STREAMING MAPREDUCE WITH GRIDGAIN AND SCALA

**Nikita Ivanov, *Fonder and CEO, GridGain Systems***

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The topic of this presentation is about demonstrating how GridGain software enables quick and easy creation of complex distributed systems that utilize in-memory compute and data grids including live coding example of streaming MapReduce application.

The live coding part of the presentation will be done using Scala programming language that is natively supported by

GridGain.

The initial 10 minutes of the presentation will be devoted to explaining the in-memory big data concepts and high-level explanation about GridGain.

**Time:** Thursday 4:10 pm - 5:00 pm

**Location:** Regency **Track:** Solutions Track: Big Data and Dev Ops

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## RIAK AND DYNAMO, FIVE YEARS LATER

**Andy Gross, Co-Creator of Riak, Chief Architect at Basho**



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October 2012 marks the five-year anniversary of Amazon's seminal Dynamo paper, which inspired most of the NoSQL databases that appeared shortly after its publication, including Riak. In this session, Andy will reflect on five years of involvement with Riak and distributed databases and discuss what went right, what went wrong, and what the next five years may hold for Riak as we outgrow our Dynamo roots.

**Time:** Thursday 4:10 pm - 17:00 pm

**Location:** Marina **Track:** Solutions Track # 2

**FEAR NO MORE: EMBRACE EVENTUAL CONSISTENCY****Sean Cribbs, Software Engineer, Basho Technologies**

A number of years ago, Eric Brewer, father of the CAP theorem, coined an architectural style of loosely-coupled distributed systems “BASE”, meaning, “Basically Available, Soft-state, and Eventually-consistent”.

This talk will dive into the design of eventually consistent systems, touching on theory and practice. We’ll see why EC doesn’t mean “inconsistent” but is actually a different kind of consistency, with different tradeoffs. These new skills should help developers know when to embrace eventually-consistent solutions instead of fearing them.

**Time:** Thursday 5:20 pm - 6:10 pm**Location:** Grand Ballroom A **Track:** Loose Concurrency & CAP theorem today**“BATTERIES INCLUDED”: ADVANTAGES OF AN END-TO-END JAVASCRIPT STACK****Juergen Fesslmeier, Wakanda Product Manager at 4D**

Creating Web Applications is challenging. Faced with supporting multiple devices, a patchwork of languages, and various technologies, it requires a team of experts to develop, configure, maintain and run them. In this increasingly complex mix, we’d like to call simplicity to the rescue. In this session we tell the story of what “It just works out of the box” means for Web and Mobile applications and how “Less lines of code produces better apps” relates to business. And best, we like to use the same language everywhere: JavaScript.

**Time:** Thursday 5:20 pm - 6:10 pm**Location:** Grand Ballroom BC **Track:** Taming HTML5 & JavaScript**ADOPTING CONTINUOUS DELIVERY****Jez Humble, Author of “Continuous Delivery”, Principal Consultant, ThoughtWorks / PC member**

While keeping software production ready throughout its lifecycle and optimizing your delivery process for shorter cycle

times might seem like a good idea to you, the rest of your organization might not share your excitement. In this talk, Jez shares stories from companies who have attempted to adopt continuous delivery and discusses the organizational, architectural and process factors that led to the success - or failure - of these initiatives.

**Time:** Thursday 5:20 pm - 6:10 pm

**Location:** Bayview **Track:** Continuous Delivery

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## ENGINEERING ELEGANCE: THE SECRETS OF SQUARE'S STACK

**Bob Lee, Track host, CTO, Square; Creator of Google Guice**

How does Square deliver its trademark seamlessness? Simple. By routinely tackling daunting engineering challenges, shielding merchants and payers alike from the inherent complexities of payment processing.

Bob takes the audience on a tour of Square's stack, tracing the payment lifecycle from end to end. From magnetic stripe decoding to multi-homed data centers, he talks about lessons learned – what worked and what didn't – and the variety of

technologies and open source frameworks concealed behind Square's simple façade.

**Time:** Thursday 5:20 pm - 6:10 pm

**Location:** Seacliff AB **Track:** Tales from Silicon Valley

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## PROJECT LAMBDA IN JAVA 8

**Dan Smith, Java Designer and Compiler Developer, Oracle**

Java SE 8 will include major enhancements to the Java Programming Language and its core libraries. This suite of new features, known as Project Lambda in the OpenJDK community, includes lambda expressions, default methods, and parallel collections (and much more!). The result will be a next-generation Java programming experience with more flexibility and better abstractions.

This talk will introduce the new Java features and offer a behind-the-scenes view of how they evolved and why they work the way that they do.

**Time:** Thursday 5:20 pm - 6:10 pm

**Location:** Seacliff CD **Track:** Java Renaissance

### WARM UP TO IDENTITY PROTOCOL SOUP

**Pamela Dingle, Senior Technical Architect at Ping Identity**

When it comes to identity and access management (IAM) for your application, it's good to warm-up with a good cup of identity protocol soup. Key ingredients include SAML, OAuth, OpenID, OpenID Connect and SCIM. In this session, learn how developers create world-class private and public applications that are secure, mobile and can be easily provisioned - all leveraging these standards-based protocols.

**Time:** Thursday 5:20 pm - 6:10 pm

**Location:** Regency **Track:** Solutions Track: Big Data and Dev Ops

### JMX: GET THE MOST OUT OF THIS UNSUNG HERO!

**Tom Lubinski, President and CTO, SL Corporation**

As we all hurl ourselves headlong into cloud environments, complex distributed architectures, and Big Data data centers, there's a tendency to think we need some trendy technology for instrumenting our apps. But the best technology is one that's proven itself over and over in large-scale environments,

if you can make it work for you.

Attend this session and see why JMX remains the best possible technology to ensure the performance of critical applications and services, and how to get the most out of this unsung hero. Detailed use cases and usable code will be provided.

**Time:** Thursday 5:20 pm - 6:10 pm

**Location:** Marina **Track:** Solutions Track # 2



# Schedule Friday

9:00 am	Conference Intro and Track Introduction		
9:20 am	Race Conditions, Distribution, Interactions--Testing the Hard Stuff and Staying Sane / John Hughes		
10:10 am	Break		
ROOM	GRAND BALLROOM A	GRAND BALLROOM BC	BAYVIEW
TRACK	ARCHITECTURES YOU'VE ALWAYS WONDERED ABOUT	NOSQL EMERGENCE	THE AGILE TEAM FIELD GUIDE
HOST	Randy Shoup	Roger Bodamer	Cesar Idrovo & Joanna Zweig
10:30 am	Scaling Pinterest <i>Yashwanth Nelapati &amp; Marty Weiner</i>	MongoDB large-scale data centric architectures <i>Kenny Gorman</i>	Discovery Curves, Group Learning and Delivering <i>Cesar Idrovo &amp; Joanna Zweig</i>
11:20 am	Break		
11:40 pm	Cloud Computing at Google <i>Randy Shoup</i>	<b>Betting the Company (Literally) on a Graph Database</b> <i>Aseem Kishore</i>	Hands on Test Driven Development (TDD) <i>Llewellyn Falco &amp; Woody Zuill</i>
12:30 pm	LUNCH is served at Atrium Level (2nd floor)		
1:05pm	SPONSOR RAFFLE DRAWINGS. Location: Grand Ballroom A		
1:30 pm	Lock-free Algorithms for Ultimate Performance <i>Martin Thompson</i> <i>(Track: Mechanical sympathy)</i>	Architectural patterns for high availability <i>Adrian Cockcroft</i>	Building a Learning Organization From Any Level <i>Matthew Barcomb</i>
2:20 pm	Break		
2:40 pm	Uncommon Sense - Scaling Youtube <i>Mike Solomon</i>	PHP on the Metal with HHVM <i>Keith Adams</i> <i>(Track: Mechanical Sympathy)</i>	Enabling Collective Improvisation in Agile Software Development <i>Adrian Cho</i>
3:30 pm	Break		
4:00 pm	Timelines at Scale <i>Raffi Krikorian</i>	Dynamo: Theme and Variations <i>Shanely Kane</i>	Using Group Research to Answer Complex Technical Questions <i>Joanna Zweig</i>
4:50 pm	Meet the Speakers (Atrium Level 2nd floor)		

Break		
SEACLIFF AB	SEACLIFF CD	REGENCY
DYNAMIC LANGUAGES FOR THE WEB	MECHANICAL SYMPATHY	SOLUTIONS TRACK # 3
<i>Gareth Rushgrove</i>	<i>Martin Thompson</i>	
Using Node.js to explore holistic Internet application performance <i>Tom Hughes-Croucher</i>	Running with the Devil: Mechanical Sympathetic Networking <i>Todd Montgomery</i>	HTML5 Cross Platform Mobile Apps Integrating APIs <i>Alex Gaber</i>
Break		
Web Framework Application Performance Stories from Django and Rails <i>Gareth Rushgrove</i>	JVM mechanics: a peak under the hood. <i>Gil Tene</i>	Situational Awareness for a Complex World <i>Matthew Barker</i>
LUNCH is served at Atrium Level (2nd floor)		
SPONSOR RAFFLE DRAWINGS. Location: Grand Ballroom A		
Closure in the Wild Web <i>Ignacio Thayer</i>	Architecting for Continuous Delivery at Ancestry.com <i>Russell Barnett &amp; John Esser</i> <i>(Track: Architectures you've always wondered about)</i>	HTML5 Cross-Platform Mobile Solutions <i>Woody Pewitt</i>
Break		
Polyglot Web Development With Grails 2 <i>Jeff Brown</i>	Datamodeling for document oriented databases <i>Tony Tam</i> <i>(Track: NoSQL Emergence)</i>	Building Mobile Ready Back-ends & Secure APIs <i>Blake Dournae</i>
Break		
Web application security for dynamic languages <i>Zane Lackey</i>	Going Under the Hood with Intel's Next Generation Microarchitecture Codename Haswell <i>Ravi Rajwar</i>	Enyo: A Truly Cross-Platform JavaScript App Framework <i>Dave Freeman &amp; Enda McGrath</i>

## ARCHITECTURES YOU'VE ALWAYS WONDERED ABOUT

**Host :** Randy Shoup **Location:** Grand Ballroom A

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*Have you ever browsed to a site like facebook or amazon and wondered what sort of software architecture they may have used, or what insights their teams must have after solving such complex and large-scale problems? This track will give you the opportunity to learn directly from some of the most well-known and high-volume web applications in the world. In previous qcon conferences, this track has featured presentations by twitter, ebay, amazon, facebook, linkedin, and netflix.*

## DYNAMIC LANGUAGES FOR THE WEB

**Host :** Gareth Rushgrove **Location:** Grand Ballroom BC

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*The dynamic languages with their expressiveness and flexibility have always been the most popular choice for web programmers and web framework creators. With features like eval, late-binding, runtime loading, mutable types, flexible dynamic dispatch and more, languages like perl, python, ruby and php have been the early material that created some of the*

*most popular web apps. This track is about the latest trends and developments in the area of dynamic languages and the web frameworks that leverage their features.*

## MECHANICAL SYMPATHY

**Host :** Martin Thompson **Location:** Bayview

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*When we develop software with a degree of mechanical sympathy for our underlying hardware, phenomenal performance can be achieved. In the modern technology world we have so many layers of abstraction that most developers have either lost, or never acquired, the skills to understanding how their code actually executes. This not only results in less than optimal performance, it can also result in unexpected behaviour causing many functional and non-functional bugs. In this track we bring you many world experts who can demystify these layers of abstraction and demonstrate what can be achieved when mechanical sympathy is applied.*



## NOSQL EMERGENCE

Host : Roger Bodamer **Location:** Seacliff AB

*Sql has long been the knee jerk reaction to storing data. With the emergence of nosql solutions with massively distributed, smart data replication, auto load sharing, auto sharding, and elasticity, sql dominance may finally have a challenge. Nosql solutions often have as much in common with each other as they do with sql solutions: document oriented, column, big table like, dynamo like, graph, etc. This track covers the wonders of cassandra, mongodb, couchdb, couchbase, redis and more.*



## THE AGILE TEAM FIELD GUIDE

Host : Cesar Idrovo & Joanna Zweig **Location:** Seacliff CD

*Your teams' remuneration isn't really for their individual skills, e.G. Software development. It is mainly for their capacity to learn and deliver this learning. This track explains why that is the case and how your agile teams can activate the learning - and the delivery - in your organization. The track is designed in ""cookbook"" format, so each session focuses on the practical application of specific techniques for agile teams.*

## SOLUTIONS TRACK # 3

**Location:** Regency

*The sessions in the Solutions Track are focused on solving particular development problems with solutions from leading vendors in the field. Sessions in this track cover best practices and use cases that attendees will find helpful in your work.*

### SCALING PINTEREST

**Marty Weiner, Cloud Ninja @ Pinterest & Yashwanth Nelapati, Cloud Balrog @ Pinterest**

Pinterest.com has grown to billions of page views per month in just under a year, and the number one question we're asked at parties is "what's in your stack?" Sit back while we take you on a tour of our current architecture, the lessons learned along the way, and the successes. We'll focus on how we sharded our MySQL database, on caching mechanisms, and on server management. We'll also touch on the conveniences and challenges of building today's most modern web infrastructures on Amazon's EC2.

**Time:** Friday 10:30 am - 11:20 am

**Location:** Grand Ballroom A **Track:** Architectures you've always wondered about

### MONGODB LARGE-SCALE DATA CENTRIC ARCHITECTURES

**Kenny Gorman, Founder, Chief Architect ObjectRocket Inc**

MongoDB is becoming more and more commonplace in large-scale data centric architectures. Large deployments

require different approaches to operations, scalability, availability, and monitoring. What strategies must be considered? What textbook approaches just don't work at large scale? Is the cloud the right place for your workload? How will something like MongoDB be different from traditional data stores? Is it even right for your workload?

**Time:** Friday 10:30 am - 11:20 am

**Location:** Grand Ballroom BC **Track:** NoSQL Emergence

### DISCOVERY CURVES, GROUP LEARNING AND DELIVERING

**Cesar Idrovo & Joanna Zweig, Ph.D, PMP, CSM, CEO of Integral System Response**

Software development is mostly not about software development, and our corporate audiences are telling us that in most cases it is only between 10-30% about software development. At least 70% is about learning. You can leave this session with at least two things to try on your own:

The first is to have your teams use the "Discovery Curves" model to chart their ability to learn.

The second is a model for group learning. You will leave with a group improvement process to harvest each member's past

group experiences and identify the common characteristics that defined them.

**Time:** Friday 10:30 am - 11:20 am

**Location:** Bayview **Track:** The Agile Team Field Guide

## USING NODE.JS TO EXPLORE HOLISTIC INTERNET APPLICATION PERFORMANCE

**Tom Hughes-Croucher, founder and principal at Jetpacks for Dinosaurs**

Node.js is the intersection of two things: a dynamic language, JavaScript and a programming style, event-driven. This isn't unique but in the past few years Node has popularised the event-driven model for application development. In this talk we'll discuss how Node's approach of combining a dynamic language containing both functional and c-like aspects with event-driven programming support approaches to application development suited to the web.

**Time:** Friday 10:30 am - 11:20 am

**Location:** Seacliff AB **Track:** Dynamic Languages for the Web

## RUNNING WITH THE DEVIL: MECHANICAL SYMPATHETIC NETWORKING

**Todd Montgomery, Chief Architect of Informatica's Messaging Business Unit**

In this talk, we will discuss some techniques that may be well known or unknown about how to get the most out of the TCP/IP stack of any modern OS. We'll discuss: how application level batching can be leveraged to remarkably avoid common TCP pitfalls, how the impact of UDP datagram size influences CPU and network efficiency, why the new OS system calls like `sendmmsg/recvmmsg` are so hot, and how easy it is to leverage asynchronous calls for fun and profit.

**Time:** Friday 10:30 am - 11:20 am

**Location:** Seacliff CD **Track:** Mechanical Sympathy

## HTML5 CROSSPLATFORM MOBILE APPS INTEGRATING APIS

**Alex Gaber, Layer 7**

How to build cross platform mobile apps using PhoneGap, and integrating various APIs.

**Time:** Friday 10:30 am - 11:20 am

**Location:** Regency **Track:** Solutions Track # 3

**CLOUD COMPUTING AT GOOGLE****Randy Shoup, *Google Cloud Computing***

Google operates one of the largest computing infrastructures on the planet.

This session will delve into the pieces of the Google technology stack, which enable these services, including BigTable, Megastore, Dremel, virtualization, etc. It will also explore Google's hard-won design principles for building and maintaining highly-available planet-scale applications in the cloud, including isolation, failure tolerance, testability, and security.

**Time:** Friday 11:40 am - 12:30 pm**Location:** Grand Ballroom A **Track:** Architectures you've always wondered about**DEVELOPING AND GROWING AN APPLICATION ON A GRAPH DATABASE****Aseem Kishore, *Developer at FiftyThree***

We started using Neo4j a year and a half ago when it was still very early in its server days, and we've grown with it considerably, starting with just one community edition server serving <1k users to - hopefully by November - having an enterprise

edition cluster serving over 1M users. It's been a rewarding journey, and I can share some of our experiences.

**Time:** Friday 11:40 am - 12:30 pm**Location:** Grand Ballroom BC **Track:** NoSQL Emergence**HANDS ON TEST DRIVEN DEVELOPMENT (TDD)****Llewellyn Falco, *Instructor for DevelopMentor & Woody Zuill, *Agile Coach for Development Practices****

Practice makes better.

Join us for a powerful learning experience where you will participate in helping to solve a sample programming problem. A Coding Dojo is a get-together where programmers follow a pattern similar to the martial arts dojo to practice their skills. In this Coding Dojo you will get an opportunity to practice the extreme programming techniques of Test Driven Development, Pair Programming, Refactoring, User Stories, and Simple Design. We will be using the Randori format, to let as many participants as possible do actual coding.

**Time:** Friday 11:40 - 12:30 **Location:** Bayview Track: The Agile Team Field Guide

## WEB FRAMEWORK APP. PERFORMANCE STORIES FROM DJANGO & RAILS

**Gareth Rushgrove**, *Web geek, GOV.UK*

Speed is good. But making web applications fast is nuanced, and never as simple as just picking the fastest language. This talk will delve into the world of Ruby on Rails and Django, two popular web frameworks written in Ruby and Python respectively. We'll look at what tools they provide out of the box and at some simple configuration options that can make a big difference. We'll also delve into a world of dynamic plugins, libraries and third party tools written to make finding and resolving performance problems easier.

**Time:** Friday 11:40 am - 12:30 pm

**Location:** Grand Ballroom BC **Track:** NoSQL Emergence

## JVM MECHANICS: A PEAK UNDER THE HOOD

**Gil Tene**, *CTO and Co-founder, Azul Systems*

The ways in which the JVM actually performs the work you ask of it is often quite interesting, and sometimes surprising. Gaining an intuition into what executing your code actually involves can help you write better, higher performing code.

Even more importantly, understanding what is NOT involved in executing your code can save days of wasted premature optimization work. In this talk, I'll discuss examples of how the freedom this machine has in re-interpreting the meaning of code can have dramatic implications on performance and other code behavior.

**Time:** Friday 11:40 am - 12:30 pm

**Location:** Seacliff CD **Track:** Mechanical Sympathy

## SITUATIONAL AWARENESS FOR A COMPLEX WORLD

**Robert Greene**, *VP of Technology, Versant Corporation*

I'll discuss how to achieve situational awareness by leveraging a new mathematical approach to linked data analysis. The advanced analytics discussed are supported by algorithmic processing using data structures uniquely handled within an object database, built using a NoSQL distribution architecture. The approach enables controlling & conducting analysis in real-time to identify irregularities in data patterns that can affect the outcome of a process. For many organizations, implementing such a process means not only smoother operations, but also a positive impact to the bottom line.

**Time:** Friday 11:40 am - 12:30 pm

**Location:** Regency **Track:** Solutions Track # 3

**LOCK-FREE ALGORITHMS FOR ULTIMATE PERFORMANCE**

**Martin Thompson, High-Performance & Low-Latency Specialist at Real Logic**

This session aims to take some of the fear out of lock-free techniques. Make no mistake this is not a subject for beginners. The attendees will learn the basics of how modern Intel x86\_64 processors work and the memory model they implement that forms the foundations for lock-free programming.

**Time:** Friday 1:30 pm - 2:20 pm

**Location:** Grand Ballroom A **Track:** Mechanical Sympathy

**ARCHITECTURAL PATTERNS FOR HIGH AVAILABILITY**

**Adrian Cockcroft, Director of architecture for the Cloud Systems team at Netflix**

Architectural patterns for high availability where the developers get highly available and scalable services using a fine grain continuous deployment model, and the pattern takes care of availability, scalability persistence and durability using a self service highly automated set of storage options. We combine memcached, redis, cassandra and S3 to meet a range of needs, all running on AWS.

**Time:** Friday 1:30 pm - 2:20 pm

**Location:** Grand Ballroom BC **Track:** NoSQL Emergence

**BUILDING A LEARNING ORGANIZATION FROM ANY LEVEL**

**Matthew Barcomb, Lean/Agile Coach & Principle Consultant at ODBox**

One of the commonly overlooked principles of Lean Software Development is “Amplify Learning”.

This session will focus on what you can do. We will briefly discuss how to set up learning environments and common organizational pitfalls. Next, we will review various ideas that have been put into practice in the real world from many levels within an organization. Finally, as a group we will work together to discover tangible learning ideas that each attendee will be able to put into practice quickly and practically.

**Time:** Friday 1:30 pm - 2:20 pm

**Location:** Bayview **Track:** The Agile Team Field Guide

**CLOJURE IN THE WILD WEB**

**Ignacio Thayer, Co-founder and CTO of ReadyForZero.com**

Much has been made of Clojure’s suitability for data processing but it’s increasingly the tool of choice for other domains. I’ll describe our experience using Clojure at ReadyForZero for

fast-paced web development. I'll demonstrate a few aspects of the language that facilitate more rapid and correct application development vs. other dynamic languages. I'll reflect on how the language can ameliorate some challenges of scaling a development team. My goal is to read between the parentheses and convince you that Clojure is a modern, pragmatic choice for a gets-stuff-done team working in any domain.

**Time:** Friday 1:30 pm - 2:20 pm

**Location:** Seacliff AB **Track:** Dynamic Languages for the Web

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### LOCK-FREE ALGORITHMS FOR ULTIMATE PERFORMANCE

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### ARCHITECTING FOR CONTINUOUS DELIVERY AT ANCESTRY.COM

**John Esser, Director of Engineering Productivity, Ancestry.com & Russell Barnett, Chief Architect, Ancestry.com**

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Ancestry.com is the leading family history website, with many petabytes of genealogical records.

The challenge was to migrate from a monolithic, coupled stack to a more service-oriented one that allowed teams to deploy code independently to the website without extensive coordination.

This presentation will discuss Ancestry's transformation to a service-oriented architecture capable of supporting continuous delivery.

**Time:** Friday 1:30 pm - 2:20 pm

**Location:** Seacliff CD **Track:** Mechanical Sympathy

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### HTML5 CROSS-PLATFORM MOBILE SOLUTIONS

**Woody Pewitt, Telerik**

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With many solutions available today enabling web developers to use their existing HTML5 skillset to develop cross-platform mobile solutions, it can be extremely confusing deciding on the best way to get started. We will examine the potential options available and take a deeper looking into the advantages and disadvantages for each.

**Time:** Friday 1:30 pm - 2:20 pm

**Location:** Regency **Track:** Solutions Track # 3

**UNCOMMON SENSE - SCALING YOUTUBE****Mike Solomon, YouTube, Distributed Systems**

Every day, people watch an average of 3 billion videos on YouTube and every minute, people upload an average of 48 hours of video.

Operating at a scale, YouTube is still written mostly in plain Python with simple conventions that encourage scalable patterns. Mike Solomon is one of the original engineers at YouTube. In this talk, he'll give an overview of the lessons learned as he's brought YouTube to scale. He'll outline his philosophy on scaling, testing, and writing code and how that has influenced many aspects of YouTube's system design.

**Time:** Friday 2:40 pm - 3:30 pm**Location:** Grand Ballroom A **Track:** Architectures you've ....**PHP ON THE METAL WITH HHVM****Keith Adams, Engineer, HipHop Team, Facebook**

Like many other popular web languages, PHP offers programmers the conveniences of dynamic typing, and late binding for functions and classes. PHP also introduces a few distinctive challenges: its reference argument-passing semantics,

and its exposure of reference counting as the underlying implementation for storage management. Facebook's HipHop VM (HHVM) is a new execution engine for PHP that combines ahead-of-time and just-in-time techniques to try save precious CPU cycles in the face of these challenges.

**Time:** Friday 2:40 pm - 3:30 pm**Location:** Grand Ballroom BC **Track:** Mechanical Sympathy**ENABLING COLLECTIVE IMPROVISATION IN AGILE SOFTWARE DEVELOPMENT****Adrian Cho, Rational Jazz ALM at IBM Rational & author of "The Jazz Process"**

A truly agile software development team must continuously integrate individual contributions, incorporate consumer feedback on an ongoing basis & deliver high quality performances on-time & in real-time. I'll engage the audience in collective exercises while speaking about managing friction, the importance of awareness, diversity, health, & leading on demand, & demonstrating how form & rhythm provide a framework for collective improvisation.

**Time:** Friday 2:40 pm - 3:30 pm**Location:** Bayview **Track:** The Agile Team Field Guide



## POLYGLOT WEB DEVELOPMENT WITH GRAILS 2

**Jeff Brown, Core member on Grails Development Team**

Part of what makes Grails so compelling is its really powerful plugin system. The Grails plugin system allows capabilities to be bolted on to applications, including adding support for a variety of programming languages. All of the major programming languages available on the JVM are supported by The Grails Framework. These include Java, Groovy, Scala, Clojure and others. This session will dive in to that aspect of the framework with a focus on Scala and Clojure and will demonstrate what is involved in adding support for new languages.

**Time:** Friday 2:40 pm - 3:30 pm

**Location:** Seacliff AB **Track:** Dynamic Languages for the Web

## DATAMODELING FOR DOCUMENT ORIENTED DATABASES

**Tony Tam, CEO and Technical Co-founder, Wordnik**

NoSQL databases can liberate developers from many of the traditional constraints of data modeling which, when taken advantage of, can have huge performance gains from not only the runtime but the developer as well. We'll cover some of

the paths to speed and efficiency with NoSQL data modeling along with lessons learned in migrating Wordnik to MongoDB. We will also talk about some of the solutions in scaling our MongoDB-backed system to over a billion API calls per month in a cost-effective and efficient manner.

**Time:** Friday 2:40 pm - 3:30 pm

**Location:** Seacliff CD **Track:** NoSQL Emergence

## BUILDING MOBILE READY BACK-ENDS & SECURE APIS

**Blake Dournae, Product Manager at Intel**

The issue with the predominant multi-tier data center app architecture is that it's designed with a browser in mind. Mobile Device Management & Web-only Firewalls don't address how to incorporate server side apps, legacy data, & identity infrastructure. A Service/API Gateway enables the mobile app economy via REST APIs with JSON & mobile friendly tokens such as OAuth. We posit end-to-end mobile enablement architecture to expose app data via APIs, advertise APIs to developers via a portal, & dev tools that make it easy to use APIs to create mobile apps.

**Time:** Friday 2:40 pm - 3:30 pm

**Location:** Regency **Track:** Solutions Track # 3

### TIMELINES AT SCALE

**Raffi Krikorian, Sr Director of the Platform Services, Twitter**

With hundreds of millions of users, Twitter operates one of the world's largest timeline delivery systems. At steady state, Twitter receives thousands of events a second whether it be tweets, social graph mutations, and direct messages - these need to be delivered to disks, in-memory timelines, email, and mobile devices. Building, managing, and debugging this infrastructure is one of Twitter engineering's biggest challenges. We will dive into these paths to understand the architecture, as well as talk about some of the tools that Twitter uses to manage and understand these paths.

**Time:** Friday 4:00 pm - 4:50 pm

**Location:** Grand Ballroom A **Track:** Architectures you've ...

### DYNAMO: THEME AND VARIATIONS

**Shaney Kane, Director of product management at Basho**

The Dynamo paper, released by Amazon five years ago, laid out a set of technical "themes" for highly available, fault-tolerant distributed systems. Since then, numerous NoSQL products have been built on its core principles. These "varia-

tions," along with recent advances in research, represent both a fascinating study in technical evolution and the forefront of the non-relational world. In this talk, we'll cover the foundations of Dynamo - consistent hashing, vector clocks, hinted handoff, gossip protocol - advances in each area, and how querying and application development has changed as a result of them.

**Time:** Friday 4:00 pm - 4:50 pm

**Location:** Grand Ballroom BC **Track:** NoSQL Emergence

### USING GROUP RESEARCH TO ANSWER COMPLEX TECHNICAL QUESTIONS

**Joanna Zweig, Ph.D, CEO of Integral System Response**

Group learning is required for effective software production. In this session we provide a workshop to acquaint you with a simple yet powerful technique for group learning to create the best action for the group. Innovative groups have complex technical questions to answer and need to access their own learning resources collectively to find their way forward. Practice in Cooperative Inquiry, a group learning and research technique, helps you recognize intuitive group learning and incorporate the wisdom of all the group's participants.

You'll be able to conduct a Cooperative Inquiry on the topic your group needs to learn about.

**Time:** Friday 4:00 pm - 4:50 pm

**Location:** Bayview **Track:** The Agile Team Field Guide

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### WEB APP. SECURITY FOR DYNAMIC LANGUAGES

**Zane Lackey, Etsy**

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Building a worldwide marketplace at scale, Etsy has overcome a number of application security challenges. This presentation focuses on interesting new approaches to application security problems posed by dynamic languages in a continuous deployment environment.

Specifically, this presentation covers useful security systems such as automatic vulnerability and application fault detection, effective platform defenses for XSS/SQLi, practical security alerting mechanisms, and visualizations of security related data.

**Time:** Friday 4:00 pm - 4:50 pm

**Location:** Seacliff AB **Track:** Dynamic Languages for the Web

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### UNDER THE HOOD WITH INTEL'S NEXT GENERATION MICROARCHITECTURE CODENAME HASWELL

**Ravi Rajwar, Intel**

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Performance matters. Historically, transparent hardware improvements would mean software just ran faster. In this talk, we first take a close look at Intel's Next Generation Microarchitecture Codename Haswell and discuss how developers can take advantage of its instruction set extensions to achieve higher performance, with an in-depth focus on the Intel® Transactional Synchronization Extensions.

**Time:** Friday 4:00 pm - 4:50 pm

**Location:** Seacliff CD **Track:** Mechanical Sympathy

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### ENYO: CROSS-PLATFORM JAVASCRIPT APP FRAMEWORK

**Dave Freeman, WebOS SWAT Engineer, Palm & Enda McGrath, Enyo**

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Learn how Enyo's elegant object model makes it simple to build and maintain even the most complex desktop and mobile apps.

**Time:** Friday 4:00 pm - 4:50 pm

**Location:** Regency **Track:** Solutions Track # 3

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## EXHIBITOR RECEPTION

**Wednesday 4:50pm – 5:35 pm**

**Exhibition Area (Street Level and Bay Level 1st floor)**

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Wednesday before the Keynote we have a reception in the exhibition area. Please join us and enjoy refreshments, network with attendees, and meet the sponsors and the exhibitors.

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## CONFERENCE PARTY - SPONSORED BY BASHO

**Wednesday 7:30 pm – 11 pm**

**Thirsty Bear, 661 Howard Street, San Francisco**

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Wednesday evening 7:30pm all participants and speakers are invited to the QCon Conference Party with drinks and finger food. This is an excellent opportunity to mingle with speakers and network with other conference attendees. The event takes place at Thirsty Bear, 661 Howard Street, San Francisco (20 min walk).

**Busses will make continuous runs between the Hotel and Thirsty Bear**

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## OPEN SPACE

**Thursday 11:40 am - 12:40 pm**

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An unconference part of the conference, where the participants has the chance, under facilitation and guidance, to discuss the topics they find interesting and network with like-minded people.



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**HOSPITALITY SUITES SPONSORED BY ORACLE AND  
VMWARE**

**Thursday 6:10pm – 6:55 pm**  
**Atrium Level (2nd floor)**

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Enjoy drinks and appetizers in the Views Lounge at the Atrium level, a great opportunity to mingle with other attendees and speakers at the conference.

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**QCON USER GROUP EVENTS**

**Thursday 6:55pm – 7:55 pm**

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During the conference several user group meetups take place – all arranged in close association with local user groups. QCon SF supplies rooms and help user groups to get in contact with international speakers. Everyone can participate, you can register on the QCon SF website: <http://qconsf.com/sf2012/usergroups/>

# Social Events, User Groups

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**MEET THE SPEAKERS RECEPTION**

**Friday 4:50 pm - 5:35pm**  
**Atrium Level (2nd floor)**

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This is the last chance to chat with speakers, or get answers to the questions you never got the opportunity to ask. Grab a drink and start mingling with the speakers.



## FREE WI-FI ACCESS FOR ALL ATTENDEES



Attendees can connect to free wi-fi while at the conference.

**Username:** qcon

**Password:** qcon2012

## DOWNLOAD THE PRESENTATION SLIDES



Go to the schedule on the QCon website and find the talk you wish to download then click on "Download slides". Some of the slides may be password protected :

**Username:** qconsf12

**Password:** seeyounextyear

## VIDEO OF THE SESSIONS ON INFOQ.COM

Selected sessions from QCon are recorded by InfoQ and distributed for free on InfoQ over 6 months following the conference

## SHARE YOUR QCON SF PICTURES ON INSTAGRAM

Share your qcon sf pictures on instagram #qconsf

## TWITTER

Hear what others are saying about the conference, find friends, and network by following @qconsf, and use #qconsf when tweeting about the conference.



## ABOUT INFOQ



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Software is changing the world; InfoQ.com is an online news / community site that aims to empower software developers by facilitating the spread of knowledge and innovation in the enterprise software development community; to achieve this, InfoQ is organized as a practitioner-driven community service providing news, articles, video presentation & interviews - all designed for people influencing innovation in their teams: team leads, architects, project managers, engineering directors.

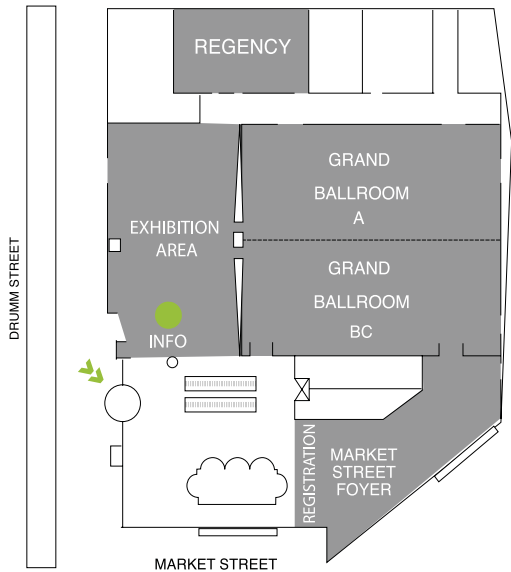
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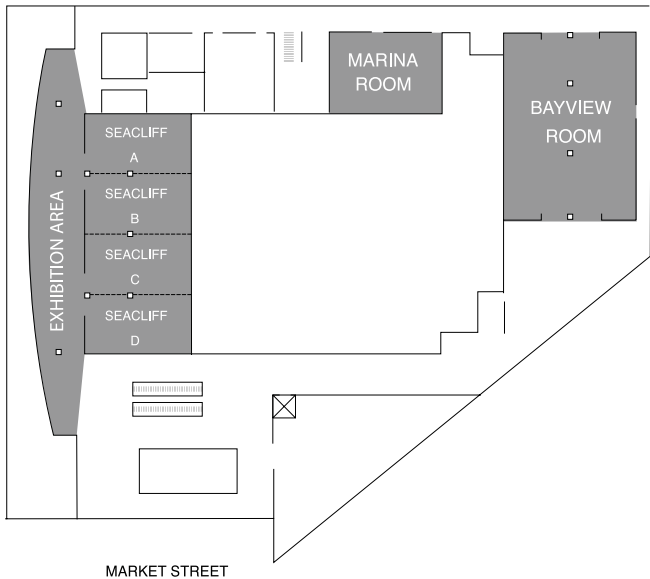
## ABOUT TRIFORK



Trifork develops software products and solutions for the financial, government, manufacturing and telecom sectors. In addition to developing software, Trifork organizes leading software development conferences and training courses for over 6000 participants each year. Some of the Trifork produced conferences include: **GOTO Aarhus, GOTO Zurich, GOTO Chicago, GOTO Amsterdam, TechMesh, NoSQL Roadshows, QCon SF and QCon London.** As an international company with a presence in United States and Europe, Trifork has offices in San Francisco, Aarhus, Copenhagen, London, Zurich, and Amsterdam. For more information: Trifork: <http://trifork.com> GOTO Conferences: <http://gotocon.com>

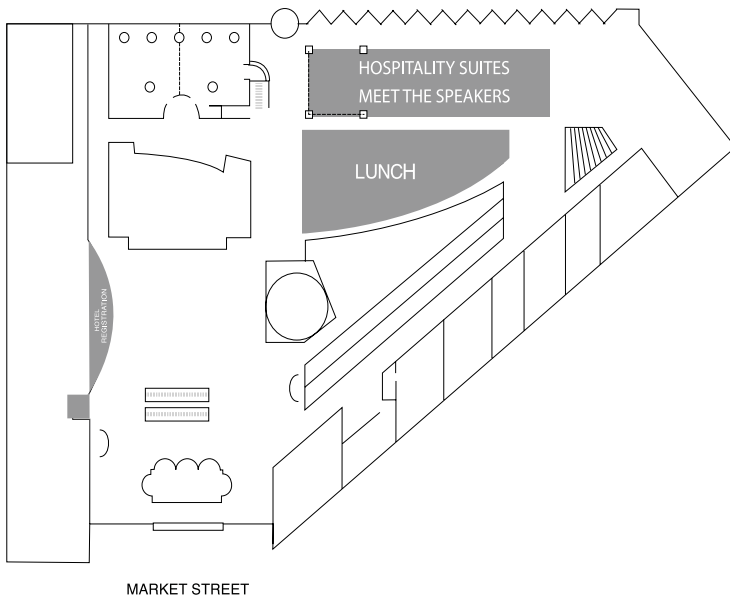


STREET LEVEL



BAY LEVEL (1st floor)





## ATRIUM LEVEL (2nd floor)



### KEYNOTES

Grand Ballroom A, B, C  
Street Level



### LUNCH

Atrium Level 2.nd floor



### EXHIBITORS RECEPTION

Exhibition Area  
Street Level and Bay Level



### HOSPITALITY SUITES

Atrium Level 2.nd floor



### MEET THE SPEAKERS

Atrium Level 2.nd floor

# Sponsors

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# QCon



**SAN FRANCISCO 2012**

Conference: Nov. 7-9 Tutorials: Nov. 5-6

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