



STAC® Performance Summit

June 8, 2011

**Hotel Andaz
40 Liverpool Street
Great Eastern Room
London**

**Doors open at 1:00pm
Meeting starts at 1:30pm
Meeting will be followed by cocktails**

Gold Sponsors:



European Market Structure Evolution and its Impact on Technology ([SLIDES](#))

Rishi Karir will examine key changes to the European matching-engine constellation, such as the BATS/CHI-X merger, as well as directions in regulation such as MiFID II. Drawing on his customers' experiences, Rishi will discuss the impact of such changes on the European trading landscape and on the technical challenges and opportunities facing trading organizations.



Rishi Karir, Director, Head of Quant Prime Brokerage Distribution, EMEA, Barclays Capital. Based in London, Rishi is responsible for distributing the European suite of quantitative products that Barclays Capital has built over the last twelve years. He has over five years experience working with quantitative clients. Rishi joined Barclays Capital in 2010 from Credit Suisse where he was Head of AES Hedge Fund and High Frequency Distribution in Europe for four years. Prior to that, he worked at Bloomberg LLP from 2002 to 2006. Rishi graduated with a BSc in Economics and Business Finance from Brunel University.

STAC Update ([SLIDES](#))

Peter will review activity in a number of the STAC Benchmark domains:

- STAC-M1 (feed handlers)
- STAC-M2 (messaging middleware)
- STAC-M3 (tick databases)
- STAC-A2 (big analytic workloads)
- STAC-E1 (execution gateways)



Peter Lankford, Founder & Director, Securities Technology Analysis Center. Peter has overseen STAC since its birth in 2006. Before that, Peter was SVP of Information Management Solutions at Reuters, where he led the \$240M market data systems business. Peter's team led Reuters into the business of low-latency direct feeds and catalyzed the widespread adoption of Linux on Wall Street by making RMDS available on that platform. Prior to Reuters, Peter held management positions at Citibank, First Chicago Corp., and operating-system maker IGC. Peter has an MBA, Masters in International Relations, and Bachelors in Chemistry from the University of Chicago.

Innovation Roundup – Round 1

- "How to detect and fix hard-to-find concurrency errors in multi-threaded systems" ([SLIDES](#))

Eric Scollard, VP of Sales and Services, Corensic

- "The Performance Benefits of Optimizing Processor Cache" ([SLIDES](#))

Scott Lasica, Vice President, Global Alliances, Rogue Wave Software

- "Hybrid Instrumentation" ([SLIDES](#))

Henry Young, CEO, TS-Associates

Panel Discussion: Optimizing x86 Apps

Trading applications—whether written in C/C++, Java, or other languages—regularly need their latency reduced, their capacity increased, or both. But not all apps take full advantage of the x86 platforms on which they run, and the gap can widen with time as platforms add features and as cores per server increase. What are the best practices for design, development, and testing of applications? What are the best choices of programming language, threading models, tools, and compilers? Our expert panels will tackle these issues, as well as your questions.



David Litner, Director, EMEA Head of Quant Prime Services IT and High Frequency Connectivity, Barclays Capital (Moderator). Based in London, David is responsible for leading development of the flagship SubM product suite for the EMEA markets. David has been building enterprise class technology for 12 years. Prior to joining Barclays Capital, David was a Senior Vice President at NYSE Technologies where he led the software engineering team. David joined NYSE Group in 2007 when it acquired TransactTools, where he was Vice President of Engineering. Prior to joining TransactTools in 2000 David worked at Computer Sciences Corporation. David graduated from Boston University with a degree in History and Computer Science.



Stephen Blair-Chappell, Technical Consulting Engineer, Intel. Stephen has worked in the Intel Compiler Lab for the last 14 years. He is author of the upcoming book "Parallel Programming with Intel Parallel Studio XE" (ISBN 9780470891650, Wiley, Nov 2011) and is a regular speaker at technical conferences in Europe and the US. Prior to joining Intel, Stephen worked as a lecturer at Birmingham City University, specializing in Software Engineering and Embedded Systems. As an academic he developed and delivered CPU architecture programming courses for a number of silicon and software manufacturers. Outside work, Stephen enjoys playing the pipe organ, and is an accomplished musical instrument restorer.



Peter Godman, Founder & CEO, Corensic. Peter joined Corensic from Isilon Systems where, as Director of Software Engineering, he led development of several major releases of Isilon's award-winning OneFS distributed filesystem and developed around twenty patent-pending technologies. Prior to his six year tenure at Isilon, Peter led development of several generations of Linux-based client software at RealNetworks.



Scott Lasica, Vice President, Global Alliances, Rogue Wave Software. Scott manages Rogue Wave Software's partner relationships, business development and worldwide technical sales organization. Scott joined Rogue Wave Software in 2001, bringing a broad range of experience in software technology and its use in vertical industries. Before joining Rogue Wave Software, Scott managed development teams for telecom conferencing and web collaboration applications. Prior to that, he worked as an engineer on data and visualization for the 4th generation programming language IDL, as well as applications for trajectory calculation, data visualization and analysis for several NASA funded interplanetary spacecraft missions. He graduated from the University of Colorado with a Bachelor of Science in Computer Science.

TEA BREAK

Panel Discussion: The Future of Messaging Middleware

In the 1990s, as trading systems became distributed, messaging middleware became the arteries and veins of the organization. A decade later, as computers began to make trading decisions, communication was exposed as a bottleneck, creating an opening for new ultra-low latency middleware solutions. At the same time, applications throughout the enterprise continued to require greater capacity and more features from middleware. Well into its third decade, where is messaging middleware headed in the trading world? When and how does middleware add value to today's ultra-low-latency trading solutions? What are the key requirements for broader enterprise messaging today? Can any single vendor satisfy all the needs of an organization today, or is best-of-breed a better approach? Will messaging get subsumed by the network? Our team of thought leaders will offer their views.



Mike Barker, Lead Developer, London Multi-Asset eXchange (LMAX). Mike spends most of his time scratching his head while thinking about simpler and faster solutions. Intermingled with travelling to various countries around the world, Mike's 10+ years of experience has been spent battling unnecessary complexity across a variety of industries (finance, telecoms, government) and in whatever technology that happens to have been hurled in his direction (Java/JavaEE, C++, .NET). Michael is also a sporadic Open Source contributor having dropped patches into a number of OSS projects including PostgreSQL, JBoss, GNU Classpath and most recently Mono.



Ben Newton, Associate Partners, Citihub. Ben leads the high performance trading practice at Citihub. In this space Citihub works to optimise application and infrastructure, using them to gain competitive advantage, to drive into new markets and open up new opportunities. Citihub work with 8 out of the top 10 investment banks, advising some of the worlds fastest and most profitable platforms. Ben has worked in messaging since the late 90's, first developing high performance middleware, then selling and now implementing it. You can imagine which is the hardest.



Shawn McAllister, CTO, Solace Systems. Shawn is responsible for deepening Solace's understanding of requirements and use cases across industries and organizations, evangelizing our unique approach and solutions, and working closely with our customers to identify ways of improving our technology and value proposition. Prior to joining Solace, Mr. McAllister led software, hardware, and test engineering teams at Newbridge Networks (later Alcatel Canada), where he was responsible for the development of features on ATM and Ethernet switches as well as the 7750 Multiservice IP Router. Mr McAllister was a regular attendee and contributor to the ATM Forum and co-inventor of several patents in the telecommunications space. Mr. McAllister holds a Bachelor of Mathematics from the University of Waterloo, with majors in both Computer Science and Combinatorics/Optimization.



Todd L. Montgomery, VP of Architecture, Messaging Business Unit, 29West (part of Informatica). As the chief architect of Informatica's Messaging Business Unit, Todd is responsible for the design and implementation of the Ultra Messaging product family which has well over 150 production deployments within the financial services sector. In the past, Todd has held architecture positions at TIBCO and Talarian as well as lecture positions at West Virginia University, contributed to the IETF, and performed research for NASA in various software fields. With a deep background in messaging systems, reliable multicast, network security, congestion control, and software assurance, Todd brings a unique perspective tempered by 20 years of practical development experience.

Innovation Roundup – Round 2

- "The Extreme Performance Platform for Trading and Risk"

[\(SLIDES\)](#)

Ambreesh Khanna, VP for Technology and Systems, Oracle Financial Services

- "Building a scalable 100% FPGA based trading infrastructure"

[\(SLIDES\)](#)

Matthew Gadd, VP Operations EMEA, NovaSparks

<ul style="list-style-type: none"> • “Advances in low latency market data messaging” (SLIDES) 	Ásgeir Eiriksson , Chief Technology Officer, Chelsio
<ul style="list-style-type: none"> • “Solarflare: The platform for precision timing” (SLIDES) 	David Riddoch , Chief Software Architect, Solarflare
<ul style="list-style-type: none"> • “New ways to correlate latency measurements with trading success” (SLIDES) 	Fergal Toomey , Chief Scientist, Corvil

Technical Brief: Using OFED APIs ([SLIDES](#))

In recent years, some trading firms and vendors have pursued alternatives to TCP and UDP—notably the OFED Verbs and RDMA APIs—in an effort to reduce latency. RDMA implementations are now available for both Ethernet and Infiniband. In this technical briefing, Richard will explain the motivations for bypassing TCP and UDP, provide a feel for what it's like to program to OFED APIs instead of sockets, sketch some ways to quantify the complexity of these APIs compared to sockets, and offer his views on when to use OFED APIs and when to use sockets.



Richard Croucher, Founder and Chief Architect, Informatix Solutions. Richard has over 30 years' experience making cutting-edge technology work in the real world. Today Richard concentrates primarily on low latency, particularly TCP bypass, for trading systems. Recent clients include a well-known exchange, an investment bank and some arbitrage traders. Richard was formerly Chief Architect of Sun Microsystems Professional Services group in EMEA and Principal Architect for Microsoft's Windows Live Global Engineering team.

Panel Discussion: Navigating Low-Latency Network Choices

If one word could summarize what trading organizations face when it comes to low-latency networking, it would be “choice.” Choice of transport (Infiniband and Ethernet of various speeds). Choice of API (sockets, RDMA/verbs, and more). Choice of implementation (increasing variety of switch and NIC vendors focused on low latency). What should customers consider when making these choices? How do the solutions differ? Put your questions to some innovative vendors, who will make short presentations then sit together for a moderated Q&A.



Rob Howes, Director of Financial Services Marketing, EMEA, Juniper Networks. ([SLIDES](#))

Rob is responsible for the growth's into the FS industry sector; leading the process of defining Juniper's markets; identifying target accounts and driving Account Planning. The role is a key link with corporate functions to ensure that Engineering and Marketing assimilate the EMEA FS priorities. Rob previously worked for Peter Jones, a successful entrepreneur (now also a TV Celebrity) with interests in mobile, telecommunications, television, media, leisure and property. Prior to that he worked in the financial vertical for Network Associates and NIKSUN. Rob's extensive knowledge of the financial markets was developed whilst working for Dow Jones Telerate and Thomson Financial selling market data and front office trading applications, in London and Asia Pac.



Paul Goodridge, Area Sales Manager, Arista. ([SLIDES](#))

With over 23 years experience in selling Networking Technology and Services into Financial Services, Paul joined Arista Networks in September 2009. As Arista's first employee in Europe Paul has spear-headed Arista's UK growth and expansion. Focused primarily on Financial Sales, Paul has been the driving force behind growing Arista's UK market share of the Tier1 Banking Communities Ultra Low Latency, Market Data and Trading Infrastructures networks and remains focused on taking Arista's innovations to an ever expanding Customer base. Prior to joining Arista Paul held the post of Client Director for BT Global Services and a number of Senior Global Account Managers roles at Cisco Systems.

COCKTAILS