



STAC® Performance Summit

December 8, 2010

Bank of America Merrill Lynch
2 King Edward Street
London

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Welcome and STAC Update

Peter will review key developments related to STAC Benchmarks and STAC Test Harnesses, including advancements in testing of market data systems. [\[slides/video\]](#)



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.

STAC-M3 Working Group Update: Tick database benchmarks

STAC-M3 provides standard benchmarks for time-series database solutions. Dan will review the latest benchmark specifications and ways they are being put to use. [\[slides/video\]](#)



Daniel Seal, Vice President, Equity Technology, Deutsche Bank. Dan joined Deutsche Bank in 2006 to build the bank's equities tick data platform. Today he runs a team that manages this platform on a global basis and has taken it cross-asset. Before Deutsche, Dan was a tick-database developer at Merrill Lynch. He has a Masters in Computer Science from Loughborough University. Dan has been involved with the STAC-M3 Benchmark specifications since their inception a year ago.

Panel Discussion: FPGA Realities

A number of trading firms use FPGA-based systems today, and a good proportion of the rest plan to consider them. Some are even interested in developing for FPGA themselves. Our panelists address the trajectory of FPGA hardware, packaged products that use FPGA, and the key issues in developing code for FPGA. [\[slides/video\]](#)



John Oddie, CEO & CTO, Celoxica. John originally joined Celoxica as a non-executive director and acting CTO in early 2008 following the relaunch of the company and has been instrumental in directing the firm's advanced trading product roadmap. In summer 2010 John took up the reins as full time CEO and CTO in response to the growth in customers and broadening product development. John is based in the UK and has over 25 years' experience working in the financial services sector with particular focus on market trading, Celoxica's key target market. Until 2007, John ran the exchange business for Atos Euronext Market Solutions (AEMS), the largest business unit of the firm, which provides technology and services for global exchanges, clearing houses and capital markets. Prior to this, he was EVP of Instinet's Global Equities business and has also held senior technology roles at Goldman Sachs, Credit Suisse and Merrill Lynch.



Oskar Mencer, CEO and Founder, Maxeler Technologies. Prior to founding Maxeler, Oskar was Member of Technical Staff at Bell Labs, leading the effort on "Computing with FPGAs" within the Computing Sciences Center. He joined Bell Labs after receiving a PhD from Stanford University. Besides his work with Maxeler, Oskar is also affiliated with the Computing Department at Imperial College London and holds a Consulting Professor position at the Geophysics department at Stanford University. Oskar's experience includes start-ups and more established companies in Silicon Valley such as DIGITAL, Rockwell and Hitachi (Tokyo).



David Buechner, Vice President, Business Development, Impulse Accelerated Technologies. Impulse provides tools, intellectual property, turnkey systems, and training in the use of FPGA technology. Impulse clients include financial services organizations, government agencies in the US, UK, and France, and leading industrial companies from Honda to Intel. Impulse tools enable your team to program and change trading strategies 2 to 10 times faster than hand-coding methods. In his role at Impulse, David contributes to industry journals, presents at conferences and trains engineering teams worldwide on how to shorten their development time and accelerate algorithm performance using C-to-hardware techniques. Prior to Impulse, David was a Division Vice President with Harris Corporation, a telecomms systems provider.

Innovation Roundup – Round 1

- "Lighting the Way to Extreme Low Latency" [\[slides/video\]](#)
- "Wire Speed Capture for Latency-Sensitive Environments" [\[slides/video\]](#)

William McLane, Senior Product Architect, TIBCO Software

Matthew Percival, Regional Director EMEA, VSS Monitoring

- "Precision Instrumentation – An Update" [\[slides/video\]](#)

Henry Young, CEO, TS-Associates

- "Scaleable Latency Measurement Methodology - Breaking the Rules" [\[slides/video\]](#)

Rony Kay, CEO, cPacket Networks

Latency-optimized FIX

The FIX protocol has become a staple of electronic trading in several asset classes. However, latency-sensitive trading groups frequently opt for native exchange protocols. In his role as co-chair of the High-Frequency Trading Working Group at FIX Protocol Limited (FPL), Mark will describe a brand new initiative to create a lower-latency implementation of FIX. [\[slides/video\]](#)



Mark Reece, Head of eTrading Solutions, HSBC. Mark has over 20 years' experience in technology. At HSBC, Mark has global responsibility for the eTrading Solutions Engineering and Capacity Management groups. He works across asset classes in the investment bank to ensure that infrastructure meets the performance requirements of the business, such as developing end-to-end low-latency solutions, including co-location, proximity hosting and WAN optimisation. Mark also works closely with both operations and development teams to investigate and resolve performance issues. Mark is actively involved in the FIX IPL WG and is the co-chair of the new HFT WG. Prior to HSBC, Mark was Trading System Architect at the LSE where he initiated the project to introduce TradElect and Infolect to replace previous generation systems. Prior to that, Mark was a partner at Capco and an Associate Partner with Andersen Consulting.

Panel Discussion: Networks

Technology and economics continue to evolve on both sides of the firewall, be it 10GbE, Infiniband, kernel bypass, DWDM, or cross-border routing. Our panelists offer their views on where these changes are headed. [\[video\]](#)



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.



Mark Akass, CTO, BT Global Banking & Financial Markets, BSc CEng FIET. Mark is responsible for driving technology innovation and client engagement to enable BT to serve the global financial industry in retail and capital markets. He was previously VP of BT's financial services portfolio covering the award-winning BT Radianz and Trading Systems capabilities. Mark joined BT with its acquisition of Radianz, where, as VP of Engineering, he was responsible for building RadianzNet, the company's award-winning global network and product platform now serving 14,000 financial sites. Prior to Radianz, Mark held senior executive roles at Equant, spent four years as Manager of Network Development at the LSE, and began his infrastructure career at BT. Mark earned a first class honours degree in electronics and communications engineering in 1983. He's a chartered engineer and a fellow of the Institution of Engineering and Technology.



David Riddoch, Chief Software Architect, Solarflare. David co-founded Level 5 Networks in July 2002 and joined Solarflare when it merged with Level 5 in April 2006. David is the architect and lead developer of Solarflare's market leading OpenOnload network acceleration middleware. David's mission is to deliver absolutely the best possible performance without asking users to abandon the standard network stack: Sockets, TCP, UDP and Ethernet.

Innovation Roundup – Round 2

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| • “Latency Management for Direct Market Access and High Speed Trading Services” [slides/video] | Raymond Russell , CTO, Corvil |
| • “Testing results for 1588 on live WANs” [slides/video] | Stuart Wilson , CTO, Endace |
| • “How to best benefit from syn1588 based clock synchronization on the application level” [slides/video] | Nikolaus Kerö , General Manager, Oregano Systems |
| • “Precise Time Synchronization Verification” [slides/video] | Paul Skoog , Product Marketing Manager, Symmetricom |

Q&A on time sync and latency monitoring

Feedback from the last London Summit indicated that people wanted more discussion of time synchronization. So, by popular demand, presenters will field questions from the Council on these topics. [\[video\]](#)